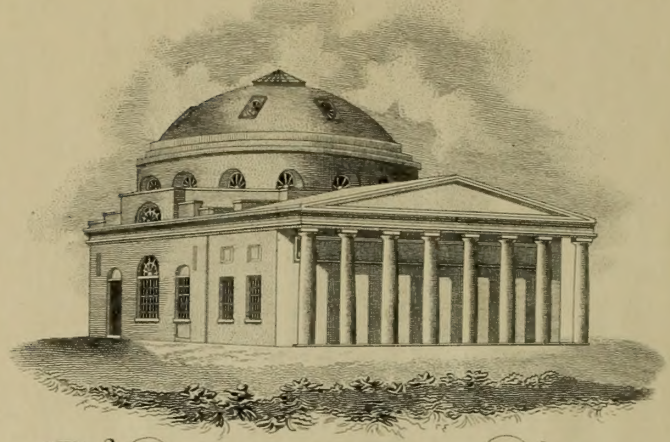
Rebound;

JAN 16 1941

LIBRARY
OF THE
School of Medicine



University of Maryland

(CORRECTED TABLE OF CONTENTS)o

UNIVERSITY OF MARYLAND

THESES

1850 (c)

Author	Title
Nally, Robert J.R.	Differential Diagnosis of Pulmonary Diseases
Mckew, Denis I.	The Physiology of Uric Acid and Urea
Keyser, Charles C.	The Study and Practice of Medicine
Rankin, Robert G.	Signs of Pregnancy
Heagy, George W.	Typhoid Fever
Anonymous	Memory
Bromwell, Robert E.	Auscultation of the Lungs
Merryman, M.W.	Report of Five Cases
Eccleston, John C.	Cases
Steuart, James A.	Pathology of Fever
Safscer, Fred K.	Acute Pleuritis
Thomas, James	Cynanche Trachealis
Wilson, Henry M.	Etiology

HSHSL 2011 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1850(c)

Nally, Robert J. R.	Differential Diagnosis of Pulmonary Diseases	p.36
Mckew, ~~Dennis~~ Denis I.	The Physiology of Uric Acid and Urea	p.39
Keyser, Charles C.	The Study and Practise of Medicine	p.21
~~Rokin~~ Rankin, Robert G.	Signs of Pregnancy	p.19
Heagy, George W.	Typhoid Fever	p.30
Anonymous	Memory	p.32
Bromwell, Robert E.	Auscultation of the Lungs	p.20
Merryman, M. W.	Report of Five Cases	p.27
Eccleston, John S. W.	Cases	p.28
~~Steward~~ Stewart, James A.	Pathology of Fever	p.35
~~Sascer~~ Safscer, Fred K.	Acute Pleuritis	p.33
Thomas, ~~Jas~~ James.	Cynanche Trachealis	p.22
Wilson, Henry M.	Etiology	p.22

An

Inaugural Dissertation

on

Differential diagnosis of Pulmonary diseases.

Submitted to the

Examination of the

Provost

Regents and Faculty of Physic

of the

University of Maryland

by

Robert J. R. Nally

of

Maryland

1857

1MD
1889

To

William Power M.D.

Professor of Theory and practice of
Medicine in the University of Maryland,
these lines are most respectfully
dedicated by the

Author

As it devolves upon the medical student on his application for gra=duation to present a dissertation on some medical subject, I have chosen for your consideration that of the Symptoms and differential diagnosis of pulmo=nary diseases and pleuritis. —

These form the most interesting group of diseases to the Physician, being among the most common and also the most critical in the vast catalogue. A correct knowledge of the nature and symptoms of these diseases is also indispensable to the Physician, for when he sees a patient laboring under some thoracic disease, his object should be to know what part of that important viscera is af=fected, so that the treatment may be properly directed to the

Counteracting of the disease, and the prolong
=ation of the patients existence. - The diffe
=rential diagnosis also, is of no less impor
=tence, for as some of the symptoms in the va
=rious diseases which effect the thorax corres
=pond, it is necessary that other symptoms peeu
=liar to one of those diseases and not to another
should be exhibited in order to lead to a correct diagn
=nosis. —

In the thorax of a healthy individual there
is heard, when the ear is applied a soft
vesicular murmur or breathing, produced by
the passage of air through the aerial passages, but such
=en the lining membrane of these passages are attacked
by inflamation, symptoms of bronchitis arise. —
This disease is usually ushered in with hoarseness, and aching
of the limbs, considerable lassitude and weariness, chilliness, fol
lowed by febrile excitation, there is also a sense of heat and
uneasiness in the anterior part of the chest, and frequently
a sense of tightness, and soreness. Cough is usually among
the first of the symptoms, and frequently

the most prominent, At the commencement it is usually dry and frequently occurs in paroxysms, generally in the morning. This stage is usually attended with febrile excitement. headache, furred tongue, high colored urine and frequent nausea. After a few days the patient begins to expectorate a frothy viscid mucus. the increase of which is attended with the amelioration of all the symptoms, and as the inflamation diminishes, the sputa are expectorated with greater ease, the skin becomes moist, & the urine flows plentifully. Even in this stage the inflamation may again increase and with it all the symptoms attending. If it be confined to the large bronchi the prognosis will be favorable, but frequently it extends to the smaller bronchi and their ramifications. then the prognosis becomes more unfavorable. and in proportion to the inflamation of these ramifications is the seriousness of the prognosis, sometimes the inflamation is so extensive as almost to lead one to suspect pneumonia. but the absence of the rusty sputa, dulness on percussion &c will clear

away our suspicions. though in this stage of inflamation we frequently have slight dulness on percussion, but in the milder forms there is very slight or no dullness on percussion, — We also obtain valuable information as to the stage of the disease by auscultation — In the earlier stage of the disease we obtain by this means the dry sonorous and sibelent rale. The former is peculiar to the larger bronchi. the latter to that of the smaller and their ramifications, Both are caused by the narrowing of the aereal tubes by inflamation or by adherent viscid mucus, but it is not always that these sounds are heard, on account of the mildness of the inflamation. — Sometimes a hissing or whistling sound is heard, caused by diminished calibber of one of the bronchi, and may be known by its persisting both in inspiration and expiration. — The inflamation also varies with the extent which these sounds are heard over the chest, — The dry rales are not

is a viscid expectoration mixed with blood.
The pain in this disease is often very acute
at the first, but afterwards becomes obtuse.
It may be felt in the side or back
or on both sides, when both lungs are affect-
ed, the pain most frequently arises from
~~inflamation of the~~ pleura, frequently it
is entirely wanting, or is only felt when
a deep breath is taken. The breathing is
also quickened, attended with a feeling of op-
pression, frequently there is considerable
dyspnœa, so great that the patient is fre-
quently forced to an erect position. This dys-
pnœa is generally increased with the extent
of the inflamation and consolidation. great dys-
pnœa, quick respiration and livid face augurs
very unfavorably. There is generally ~~always~~ some
cough attending this disease, but sometimes
it is entirely wanting for several days after
its commencement. At first it is usually
dry with slight expectoration, but soon a

always pure, for there is generally some degree of exudation from the first, which gives rise to a composition with the moist sounds. Sometimes also we hear mingled with these sounds the vesicular breathing, which indicates that some of the smaller bronchi are free from inflamation. — After sometime the stage of secretion is fully formed, then the moist sounds predominate, but the dry sounds are still heard. — If the inflamation is very extensive and the smaller bronchi and their ramifications are implicated, auscultation will reveal to us the subcrepitant rale, which may lead us to suspect pneumonia, especially if there be sibilent rale at the same time, but the facts of their being no rusty sputa nor bronchial respiration will be sufficient evidence that the inflamation has not extended to the parenchima of the lungs. — Sometimes one of the bronchi becomes closed up with

mucus, causing an absence of the respiratory murmur. but resonance on percussion will convince us that the lung is not hepatised.—

When the air vesicles and parenchima generally become involved by inflamation. then pneumonia is established. a much more critical disease than the one just described.— There are several varities of pneumonia. named according to the portion of the lung effected. they are lober, lobular and double pneumonia. when the pleura is implicated. it is termed pleuro-pneumonia.— In acute pneumonia there are three well marked stages:- 1st that of congestion. 2nd hepatisation, and 3rd suppuration,— This disease is usually ushered in by a chill. followed by fever. with excitement. in the mean time there is difficult breathing and pain in the back and side, sometimes these symptoms are preceded by uneasiness. lassitude and slight fever. when the disease is fully developed there

viscid mucus is expectorated and after a while it becomes tinged with blood and becomes more so as the disease advances. until it attains to the appearance of rusty sputa, which is so characteristics of the disease.- The sputa adheres tenaciously to the vessel which contains it, when turned up.- it is also very easily distinguished from that of bronchitis which is often streaked with blood.- This disease is sometimes complicated with Catarrh, which may be known by the expectoration of a frothy transparent sputa with the rusty.- When the sputa assumes the colour of liquorice solution it is an unfavorable symptom. A fetid odor of the sputa indicates gangrene of the lungs.- Fever always accompanies inflamation of the lungs. it varies considerably in degree, sometimes mild and at other times severe. [illegible] is generally attended with exacerbations, which occur towards evening with

an increase of all the symptoms, the pulse generally very full and strong.— The skin is usually hot and dry but occasionally moist, & the urine scanty and high colored. The tongue is generally moist and coated.- Sometimes these symptoms are accompanied with vomiting and diarrhea.— But the most certain signs of this disease are obtained by auscultation and percussion.- by means of these the precise state of the pulmonary tissues is indicated, from the commencing stage of congestion to that of purulent infiltration, but the indications in the last stage are very obscure.— In the stage of congestion percussion affords but little information as to the condition of the lungs, there is generally a slight diminution of resonance but not enough to form a ground of diagnosis, but auscultation gives us decided evidence as to the state of the lungs, in the place of the

healthy vesicular murmur which we have been hearing, we now hear a subcrepitant rale, at first mingling with the vesicular murmur but after awhile entirely obliterates and supersides it, - it - is at first heard at the begining of inspiration and at the close of expiration but it soon continues during the whole of respiration, As the inflamation extends and involves the parenchima of the lung, a ~~coarse~~ subcrepitant sound is heard, which is termed the crepitant rale, When these rales are obscure a full inspiration will often develop them, - These latter sounds are considered unfailing signs of pneumonia, -

As the disease advances to the second stage the above sounds gradually cease and bronchial respiration resumes the place thereof, which is a characteristic sound of hepatisation, A prolonged respiratory and somewhat blowing murmur generally procedes the bronchial respiration,

Sometimes no sound is heard, but only a heaving of the chest is perceived,— this happens when the lower part of the lungs is effected by inflamation— Vocal resonence is also very distinct in this stage, so that when the patient speaks the sound is conveyed directly from the bronchial tubes by the condensed lung to the ear of the auscultator,— There is also considerable vibration felt by the hand when applied while the person is speaking— Percussion in this stage affords strong evidence of the disease, affording complete dulness or even flatness,— If the disease should be arrested in the stage of congestion, the crepitant rale gradually ceases and the respiratory murmer resumes its place, and in the stage of hepatisation, if the inflamation be resolved, the crepitant rale will gradually return and then the natural respiratory murmer with resonence on percussion,— The third stage presents the

same symptoms as the second, viz. dullness on percussion and the respiratory sound. but the supervention of the mucous rale upon the bronchial respiration may sometimes lead to the suspicion that the third stage has been formed.— If an abscess form and if the cavity contain liquid, gurgling will be produced.— if there is no ligiid, there will be cavernous respiration, and resonance of the voice.— Sometimes we meet with the symptoms of bilious or typhoid fever combined with those of pneumonia, which are termed bilious or typhoid pneumonia. —

The next inflamatory stage that claims our notice, though not of the lungs, is so closely connected with them, and some of their symptoms so closely resembling, might be mistaken by a careless observer, is the investing membrane of the lungs, the pleura.— The characteristic symptoms of pleurisy

are pain in the side, cough, quick and short breathing, also chill and fever.— The pain may or may not accompany the chill, it is generally very sharp and piercing, and is frequently designated by the term "stitch in the side" it is most frequently felt about the mamary region but sometimes elsewhere, it is generally increased by inspiration or cough and also by laying on the effected side,— as the effusion from the inflamed pleura increases the pain diminishes.— The cough is generally dry, sometimes it is accompanied with a frothy expectoration occasioned by some degree of bronchial inflamation,— The pain is supposed to be caused by the rubing of the inflamed surfaces of the pleura against each other in the acts of respiration,— it frequently varies in intensity as well as locality, sometimes very acute, then again

moderate or perhaps no pain at all, It may occupy any part of the pleura whatever but most frequently about or below the mammary region. The pleura may return to its healthy state without any effusion whatever. such cases are termed dry pleurisy but it is genrally accompanied with the perfect adherentcy of the opposite pleura.

When the inflamation terminates by effusion into the cavity of the pleura, other signs of importance exhibit themselves, we have dullness on percussion, varying with the amount of effusion and position of the patient. which is important in distinguishing it from the dullness of pneumonia. When the effused fluid is augmented to such a degree as to bind in the distention of the lung by the ingress of air, then we bring auscultation to our aid. If we cause the patient to speak, bronchophony is conveyed to

our ear, or most frequently a modified form of that - ægophony, which is a peculiar quivering ~~[illegible]~~ of the voice caused by its passage through the fluid instead of the condensed lung alone, but these sounds run into each other by such regular gradation that it is frequently difficult to distinguish between them - but when the bronchial tubes become compressed by the fluid so as to prevent their vibration, pure bronchophony is heard - Whenever we hear the bronchial voice or ægophony we also hear bronchial respiration, but when the plural cavity becomes so much distended as to render percussion dull over the whole effected side, these sounds cease to be heard, but on the opposite side we hear increased or puerile respiration, and the hand applied ~~[illegible]~~ the effected side will indicate an entire absence of vibratory motion, while it will be greatly augmented on the healthy side. - The decubitis of the patient is also an important item in diagnosing this disease

especially its different stages. In the early stage while the pleura is inflamed and the lancinating pain is felt in the side, the patient is inclined to lay on the healthy side, but when the effused fluid accumulates, the patient then inclines to the affected side, because the pressure of the fluid on the healthy lung would give rise to great dyspnoea and distress and there is also at this period an entire absence of pain. When the accumulation of fluid is very great the intercostal spaces bulge out and the side becomes much more distended and larger than the opposite, which may be ascertained by measurment. The dyspnoea also becomes excessive owing to the great pressure on the mediastinum and consequently compression of the lungs and it often becomes necessary to resort to the operation of paracentisis thoracis which is followed by immediate relief to the patient, this state constitutes empiema. If the fluid is absorbed the diseased side frequently

becomes very much contracted so that the patient on recovery maintains a laterally inclined position in walking.— I should have mentioned that the fever at the commencement of pleurisy is generally high and the pulse strong which may sometimes be considered an important item in distinguishing it from pneumonia in which the pulse is softer.—

We have noticed the effect of inflamation upon the lungs- the symptoms to which it gives rise, etc.- but there is another disease which invades the vesicular structure, though generally of less serious import in its uncomplicated state, viz. the dilatation of the air vessicles and areola tissue of that organ- or emphisema.— This is a disease which frequently occurs in early childhood, and also at a later period, and considered by some as hereditary.— In the early stages of the disease when only a few of these vessels are moderately distended, the symptoms may be entirely wanting and or it is only discovered after death, but as

the disease advances, which it is likely to do, with the age of the individual, symptoms distinctly exhibit themselves, — dyspnoea occurs, at first slight, but afterwards to a very great degree so that the patient is obliged to sit up on account of the pressure of the abdominal viscera upon the diaphragm, and this accounts for the more frequent occurrence of extreme dyspnoea during the night, the patient being in a recumbent posture, there is also considerable lividity of the countenance during these extreme cases. The lungs at this stage are very much distended so that we are enabled to obtain greater evidence as to the nature of the disease, from the physical than from the general signs. The thorax becomes much distended, so that it obtains a cylindrical shape and is much more rounded than usual both in front and posteriorly; the intercostal spaces are widened, though not bulged out. the infra and supra clavicular fossae become filled up,

When this distention occurs only on one side, it is more apparent than when on both,— But But auscultation and percussion are the sine qua non in the diagnosis of this disease as well as ~~the~~ all other thoracic diseases,— In percussion the chest emits a peculiar clear sound over the whole emphisematous part, while auscultation exhibits a very feable respiratory murmur, the dry crepitant rale of catarrh is heard,— When the areolar tissue of the lung is distended with air it constitutes inter lobar or sub pleural emphisema being the true emphisema of more ancient writers, When it appears on the surface of the lungs, it may be distinguished from the distention of vesicular emphisema by its being movable on pressure— this kind may be ~~produced~~ immediately but the vesecular form is the work of time,— it may be produced by heaving straining or any thing that may cause great muscular action, it also differs in its seat and

may be suspected when great dyspnoea follows immediately after violent straining. The friction sound is also frequently heard. supposed to be caused by the rubbing of the pulmonary against the costal pleura and according to some authors a subcrepitant rale may also be heard caused by bubbles of air forcing themselves in the cellular tissue. This is much more manageable than the others and frequently gets well of itself. The phisical signs of emphisema in children are considered very different from those of adults. The respiratory murmer is generally aggregated and percussion remains about the same as in health. The circulatory cellular tissue having become much demenished there is a consequent interruption of the flow of blood through the lungs and this is likely to cause hypertrophy and dilatation of the right

side of the heart and consequently drop-
sical effusions ——

The next disease which will occupy our attention is Phthisis pulmonalis. Than which none is more distructive and more to be dreaded in the whole category of diseases. It displays its ravages in every rank and and age, neither are the fair, the beautiful and the talented by any means exempt from its distructive grasp. The term phthisis pulmonalis is now generally restricted to the deposition of tubercular matter in the lungs, though the deposition of this matter is by no means limited to that organ, but may also be deposited elsewhere but the malady displays itself more conspicuously in the lungs, The deposition of Tubercle in the lungs at first gives rise to very slight symptoms. The first of the general symptoms is cough, afterwards dyspnoea expectora-

=tion. haemoptysis. hectic fever. thirst, diarrhoea, em=aciation, oedema, aphthae, — The cough at first is generally slight, short and dry and occurring on the patients rising in the morning, or on making any unusual exertion; it sometimes ceases in warm weather and occurs again on the approach of cold. after a time it becomes troublesome at night and tended with mucus expectoration, — When the cough comes on without any perceptable cause there is strong reason to suspect that tubercular deposit is the cause. though chronic cough may rise depending on a disordered stomach. chronic catarrh. or may be a nervous cough of chloro=tic patients. or disease of the heart; but all these may be known by accompanying symptoms. — sometimes the cough may be entirely manting. — Dyspnoae though it often occurs early in this disease is not much to be relied on in this stage; it is not generally troublesome untill

the disease is considerably advanced; but towards the last stage it becomes very distressing. The dyspnoea varies generally with the advance of the disease, being slight when it is slow but very troublesome when it is rapid in its march. This symptom is often supposed to be caused by debility, sometimes from the feeble and oppressed state of the heart's action, and is also believed by some that the lungs of a tubercular patient is frequently congested, which is supposed to be the cause, for when haemoptisis occurs or venisection is performed it is attended with an amelioration of the dyspnoea. When the dry cough has continued for sometime it then becomes softer and a transparent fluid or saliva is expectorated, which becomes more [illegible] as it advances, after a time specks of opaque matter become apparent in this frothy fluid and frequently streaked with blood, which

Sputum matter becomes more and more augmented as the disease advances, and assumes a yellowish hue and is expectorated with greater easy, But the sputa again changes its appearance when the disease is far advanced and attains a grayish or wool colour appearence, which generally continues till the close, but the aspect of the sputa and the time of its appearance are by no means invariable.

Haemoptisis is now considered one of the first symptoms of phthisis. The quantity of blood expectorated varies considerably from a very small quantity to pint or more and sometimes occurs frequently, but we find exceptions to this symptom as well as others, for persons have been known to expectorate blood from their youth up without ever having attacks by that disease, while others have been known to pass through the whole course of the disease without ever once having haemoptisis, but these may be considered only as exceptions,

Pain is a very common attendent on phthisis. though not always considered an important symptom, but in the early stages of this disease, when it is felt about the clavicle in a person supposed to be tuberculous, or when there is cough, it should receive due attention & great importance should be attached to it when this disease is suspected and the more prominent symptoms are wanting. Hectic fever is constant attendent on phthisis especially in the latter stage, commences with slight chilliness generally in the evening followed by fever and perspiration. In the first stage of the disease this fever is frequently wanting, but sometimes occurs from the very first when it is so very mild as scarcely to be noticed by the patient, but in the more advanced stage all the symptoms of hectic are aggravated. the fever is much more severe, and the perspiration being so very profuse bears no proportion to the fever, and it usually exhibits itself towards morning, and so distres

=sing is it that the patient generally dre
=ds the hour of sleep.— Dearrhoea is a com
=mon accompaniment of the latter stage of
this disease.- it frequntly diminishes the
cough and expectoration. but has very little
effect on the perspiration.- it is genrally very
distressing. the evacuations being frequent
=ly proceded by sivere abdominal pains.
and followed by extreme debility.- It is of but lit
=tle consequence in diagnosis. unless some of the
primary symptoms are absent.— Persons who
die with phthisis are genrally reduced to
great emaciation.— this emaciation does
not occur so soon in the young. but in el
=derly persons it is one of the first symptom
=ms of the disease.- when dearrhoea occurs it
accelerates it to a great degree.- It is only
important as a diagnostic symptom in ob
=scure cases. when we see great emaciation
without any particular cause and with
=out any of the usual signs of phthisis

it should lead us to suspect the disease.
In the latter stage ædema of the ankles occurs
but this is of no importance as a diagnostic
symptom, but may be considered a prognostic
of approaching dissolution. There is also
an aphtheous state of the mouth at this period.
We have now noticed all the general symptoms appertaining to phthisis, but there
are others to be considered of greater importance as regards the condition of the lungs
these are the phisical signs.
The first deposition of tubercular matter
generally occurs in the upper lobe of the
left lung in the clavicular region.
On inspecting the chest when the patient breaths, the effected side does not
become so much elevated as the other,
but scarcely moves at all, while the healthy
side expands more than usual. If we now
resort to percussion immediately beneath
the clavicle, we obtain dullness, varying

according to the amount of deposit, if there is no dullness we may be lead to conclude that there is no tubercular deposit, or if any, very ~~[illegible]~~ in quantity; — Auscultation will also convey to us the fact of tubercular deposit beneath the clavicle, by feableness of respiration at that point, while on the opposite side it becomes exaggerated. As the deposition becomes more extensive, other sounds will be heard, — viz. bronchial respiration with prolonged expiration. These sounds may also be heard in the supra-scapular region, though not so distinctly; — There is also an increased vibratory motion felt by the hand, if it be applied to the subclavicular space. — These signs generally indicate solidification of the pulmonary tissue, and when there are no other signs of pneumonia present, the evidence in connexion with other signs of phthisis, is strongly in favor of that disease; —

In the more advanced stages mucus, subcrepitant, and sometimes, sonorous rales may be heard. There is also dullness in this stage to a greater extent, and the vibrations are more perceptable. – The upper part of the chest frequently appears contracted and the ribs are also less movable. – The phisical signs in this stage also reveal to us that other changes are taking place. Viz, the formation of cavity. – auscultation conveys to us at first a crackling sound, but as it enlarges a peculiar bubbling sound is heard, and when it becomes very large an amphoric resonance of the voice may also be heard. –

Percussion still conveys a dull sound, and most frequently to the close. except in some instances when the cavity is very large, when it yields an amphoric or cracked metallic sound &c.

Differential Diagnosis

Having now given the general and phisical signs of pulmonary diseases, we will now re=vert to the differential diagnosis of those diseases,—

When a phisician sees a patient labor=ing under some thoracic disease, his first object is to ascertain what organ is effected and what the disease the disease or under which the patient is labor=ing, whether it be pneumonia, pluirisy, or what,— the neglect of such knowledge might lead to serious consequences and perhaps the death of the patient,—

Bronchitis the first which we will notice, on account of the similitude of some of its symptoms, might sometimes be mistaken for phthisis or pneumonia, The accute form can in no instance be mistaken for phthisis, but the chronic might be erroniously recognised as that

disease on account of the close resemblence of their general symptoms.— in it are displayed most of the general signs of phthisis. such as the hacking cough Rough, more or less expectoration, great emaciation, frequent pulse, night sweats, etc

But the phisical signs will indicate to us that it is not phthisis.- the general resonece over every part of the lung, while there is entire absence of consolidation, bronchial resonence and respiration and also the want of any of the signs indicating a cavity, and by the mucus and subcrepitant rale being equably diffused over the chest,—

Bronchitis may also be mistaken for the disease which we are about noticing next, namely pneumonia, when the minute bronchi are involved; but it may be distinguished by the fact that in the former there is more of a sensation

of soreness than an acute pain, and that in the upper part of the chest immidiately behind the sternum- the expectoration is sometimes streaked with blood; but the rusty sputa which is peculiar to pneumonia is entirely wanting,- and over the chest may be heard the dry and mucus rales,- There is no bronchial respiration, or broncophony, which is peculiar to the second stage of pneumonia and generally the respiratory murmur may be heard over the whole anterior part of the chest, but sometimes the two diseases are combined, then, when pneumonia is disseminated the distinguishing diagnosis is difficult.

Pneumonia is liable to be confounded with bronchitis, pleurisy, and with certain stages of phthisis, but having given the differences between this disease and bron

-chitis. when speaking of that disease. I will next notice the diagnostic symptoms between pneum-onia and pleurisy. — In the former the pain is generally moderate and dull when uncomplicated, but in the latter it is sharp and severe, and fixt — in one spot — the expectoration is rusty and viscid in the former, while in the latter it is mucus and transparent. Sometimes streak-ed with blood. — The dullness in pneum-onia at first is but slight, while in ple--urisy it is soon obvious and as it advances attains a flatness which excedes even that of hepatisation of pneumonia. — The dullness in pleurisy always changes with the position of the patient, while in pneumonia it is fixed. — In pleurisy also the crepitant rale is entirely wanting, while the friction sound and aegophony which are peculiar to it are entirely wanting in pneumonia. — There is no perceptable vocal vibration in

pleurisy, while in pneumonia it is more perceptable than in the healthy, — In pleurisy with copious effusion, there is a distention of the chest, — bulging of the intercostal spaces, — displacement of the heart etc; which is not the case in pneumonia, — The chronic form of pneumonia bears some resemblence to phthisis, but the previous course of symptoms would serve to distinguish it, — if attended with abscess, there might be some difficulty, but the fact of its occupying the lower part of the lung, and the previous signs of pneumonia having existed, will be sufficient grounds for diagnosis, — Gangrenous abscess may also be known by occupying the lower part of the lung and the fetid odor of the expectoration, —

Pleurisy the next which we will consider, is liable to be confounded with pleurodinea, pericarditis, and pneumonia

The diagnostic symptoms between it and pneumonia were given when speaking of that disease.— Pleurisy may be distinguished from pleurodinia, by the absence of all the phisical signs of the former, with the exception of diminished respiratory murmer and sonorousness of the part, caused by the imperfect expansion of the chest in breathing;— the seat of pain is also liable to be changed to contiguous parts.— there is also absence of cough and fever.—

It may be distinguished from pericarditis by the limited space and peculiar position of the dullness of the latter.— by the seat of dullness not changing with the position of the patient and the peculiar situation of the friction sound, or the "to and fro" sound of Dr Watson, and also by the entire absence of agophony.—

Emphisema of the lungs displays symptoms sufficiently diagnosticating it.—

from other diseases although it may be confounded with pneumothorax and perhaps with phthisis.- It may be distinguished from the former by the respiratory murmur being feebly heard which is entirely absent in pneumothorax and by the absence of the metallic sound which which is peculiar to the latter and a splashing sound may also be heard in pneumothorax.-

Phthisis may be confounded with emphisema, pneumothorax, pneumonia and bronchitis.- the deagnostic distinction between ~~phthisis~~ pneumonia and bronchitis were treated of when discoursing on the latter diseases.- Phthisis may be mistaken for emphisema on account of the great amount of resonance produced by the effected lung, which might be considered healthy, while the more dull or sound side might be suspected as tuberculous, but that suspicion

may be cleared away by perceiving a great
ir feebleness of respiration on the sonorous
side. — A cavity might be mistaken for pneum
=othorax, but may be distinguished by the
want of tympanitic resonance, which is pec
=uliar to the latter, and the depressed condit
=ion of the chest. — besides, in pneumothorax
the resonance varies with the position of
the patient. "

Now, I have finished my remarks. — The sym
=ptoms of most of those diseases I have witne
=ssed in the wards of the Infirmary during
the past year, but considering that my
limited practical knowledge would not
allow me to write a really practical
treatise, I have consulted the theory
of others as well as the views of
our esteemed professor of theory
=ory and practice of Medicine. —

An

Inaugural Dissertation

On

"The Physiology and Pathology

of

Uric Acid and Urea."

Submitted to the Examination

of the

Provost, Regents, and Faculty of Physic

of the

University of Maryland,

for the

Degree of Doctor of Medicine,

by

Denis I. Mc. Kew

of Baltimore.

1850

"Quis leget hæc?"

The subject on which I have the honor to present this thesis, though evidently one of great importance, is one which has met with very great neglect from the medical world. From our more recent predecessors it has scarcely obtained a passing notice and in the works of those of earlier date the statements which are made are, for the majority, vague and useless and frequently untrue. The prosecution of this branch of medical science has been fortunately reserved for our own generation - We have been chosen as pioneers in the history of this hitherto unknown and uncultivated region, and ours is the happy lot to point out its treasures and resources. But we should not here imitate the example of those who, having discovered a new territory, in the Excitement of the moment and

oblivion of their former Lands and comforts, proclaim it the long and vainly sought Strada; and find health in every sunbeam, & wealth in every sparkling pebble. We should rather penetrate its forests, ascend its mountains, and descending explore its valleys and its coast, Ere we can become fully cognizant of its resources, and designate its treacherous shoals & quicksands. That the discoveries which have, within the few past years, been given to the world in Urinary Physiology & Pathology have furnished many and very valuable aids to diagnosis, will be willingly conceded by all; but that its importance has by some been unduly exaggerated, at the Expense of other Equally, if not more certain symptoms must be equally evident. Hence results

the slight attention which, even yet, this branch of Semeiology meets at the hands of the Profession. But it should be remembered that, although many facts may be gathered from its study which would otherwise be veiled in the obscurity in which too much already of Medical Science is buried; still ~~it~~, in the majority of cases, it, like the study of the physical signs with which the labors of Laennec have enriched our Science, is only of value when taken in conjunction with general symptoms and it, without them, but one stone of an arch which we would vainly attempt to build unless they too are sought as materials for its completion. The opinions set forth in this manuscript are taken, for by far the greater part, from

writings of the best authorities on the subjects — such of them at least as were within our reach at the time it was written. Such remarks, however, as have suggested themselves to me during that period have been inserted; and for these, as the offspring of a mind which has but made the first step in the prosecution of a study so full of interest & reward, I must ask lenient Consideration.

That the morbid conditions of the urine may be duly appreciated, it is necessary that its normal condition and the sources whence it is derived in health should be first understood. The great source from which the elements of the renal secretion are drawn is that slow destruction which, from the dawn of our existence until the sun of life has set, is in constant operation. Of the materials received into the system as aliment some portions are occasionally recognized in the urine though the effect of such alimentary matters upon this fluid is much less than is generally supposed. Since the waste which is constantly occurring in the frame is as constantly replaced, it may be not uninteresting to consider how this renovation occurs. The only source of repa-

ration is found in the ingestion of food, of which, after its reception by the stomach the protein elements are separated in an albuminoid form for the purposes of nutrition while their saccharine or amylaceous elements are converted into fatty matters - substances entirely subservient to Calorification. The protein compounds thus set free from their former combinations are, by the action of the lacteals and lymphatics, carried into the current of the venous system by which they are conveyed to the pulmonary side of the heart, thence to be sent throughout the various ramifications of the pulmonic vessels where, by the action of the atmospheric oxygen, their final conversion into fibrin is effected. Now returning to the systemic heart as blood, they are to be urged on through the periphery

to take the place of those effete tissues from which, (the reign of vitality having ceased & chemical influences having asserted supremacy) by union with oxygen, the fabula of the different secretions are denied, in a fit condition for the purposes of, or Elimination from the system. In the room then of this exhausted tissue the newly formed fibrine is deposited thus maintaining an unceasing and Equalizing alternation of destruction and reparation. So far as we have proceeded Physiologists are unanimous but here is their point of departure. Upon no other subject, perhaps, does greater dissension Exist, and, since the agitation of the famous and important question with regard to the arm in which V.S. should be practised in pleuritis, none perhaps has Elicited so much

angry litigation. With regard to the combustion of the molecules of tissue, many and varied are the hypotheses presented to the lover of research.

Hallowed by names the most brilliant of the age it might seem akin to presumption to particularize or choose from these disputed opinions any one which might, to us, seem most worthy of credence.

The two most prominent however of these many theories are those of Müller and Liebig. The former of these asserts that the fibrin of the blood, formed from the food, exists as a binoxyde of protein: that in its circuit through the periphery coming in contact with the enervated and decaying atoms of tissue the two proportions of oxygen which it holds in chemical combination are yielded up for the

combustion of such atoms, while the thus deoxydised fibrin is used in filling the vacuities formerly occupied by the now dead tissue. The theory of the Philosopher of Giessen is however quite opposed to this. Liebig supposes that the blood-corpuscles are the only carriers of oxygen, that, during their passage through the pulmonary vessels, the iron which enters into their composition is, by union with oxygen abstracted from the air, converted from a Carbonate (in which state it exists in venous blood) into a Sesqui-oxyde of the metal. These oxydised globules then, according to his theory, during their passage through the vasa intermedia give up their oxygen to the decaying atoms of our economy, which, having performed their offices are

to be removed from the organism. With regard to the rebuilding of tissue, he is of the same opinion as Mülder, owning as its cause the deposition of the liquid fibrin of the blood. Of these two theories that of Liebig is, to us at least, the more satisfactory; since, besides the many beautiful physiological facts which may be adduced for its support, it is the only one which has the merit of appealing to experiments extraneous to the body for its confirmation.

Which of the two however be received as the true one is here of little importance since both equally answer our purpose and furnish the same results. Of this Excrementitious is the "destructive assimilation" (?) of Prout the results are the pabula of the different secretions. Of these Urea and Uric acid alone demand our attention.

Uric Acid.

Of the débris of muscular tissue that portion which is destined for renal Elimination is, after a few primitive formations, as those of Kreatine, and Kreatinine, presented in the state of uric acid, and in this condition the whole of the nitrogenized urinary Excrementa primarily Exist (Liebig)

Thus:

	C	N	H	O
1 at. protein	48	6	36	14
91 " oxygen				91
	48	6	36	105

=

	C	N	H	O	
	15	6	6	9	= 1½ at. uric acid
	33			66	= 33 carb. acid
			30	30	= 30 water
	48	6	36	105	

The whole of the acid thus formed is not however, as such, expelled from the system, but by the accession of another increment of oxygen set free from the blood-discs, assumes the form of a new body - Urea.

	C	N	H	O		C	N	H	O	
1½ at. uric acid =	15	6	6	9						
6 " water				6	=	6	6	12	6	= 3 atoms urea
9 " oxygen				9					18	= 9 " carbonic acid
	15	6	12	24		15	6	12	24	

Prout, however, has uttered a theory quite antagonistic to this; and asserts that the two substances (uric acid Urea) are the

results of different, though primary destruction and change. According to the theory of this Physiologist uric acid owes its formation to the combustion of the albuminous tissues, while he traces out the source of the urea in the incomplete oxidation of the gelatinous portions of the organism. Vogel, again, gives birth to a still different theory with regard to the production of these important bodies. He believes, with Liebig, that urea owes its presence to a higher degree of oxydation than that obtained by uric acid; but, unlike him, does not acknowledge the conversion of the latter into the former, stating that the predominance of either is entirely fortuitous, depending on the amount of oxygen presented to the particles of our substance at the moment of the with-

drawal of nervous influence - uric acid being the product when this amount is smaller, and the presentation of a larger quantity determining the formation of urea. Here again the weight of proof inclines the balance of judgment in favor of the views of Liebig, and shows clearly the fallacy of the other assertions. According to the theory of this illustrious authority uric acid should be decreased when, <u>Cæteris paribus</u> the amount of oxydation is above the normal condition and increased when a smaller amount than usual of this Element is offered for the purpose of Eremacausis. Of the former of these conditions the Phlegmasiæ offer an illustration; and in this class of diseases, <u>when no disturbing cause is present</u>, we find a notable decrease of Uric Acid. From the impracti-

bility of our having made for ourselves clinical observations on the subject of this theory, we are unable to advance anything positive on this head, being obliged to trust for these results to the observations of others - ignorant alike of the manner in which they were made and the circumstances attendant upon them - a point to which observers seem to have paid but very slight attention. Golding Bird, in his work on Urinary deposits, cites the observations of Edmond Becquerel as antagonistic to the "ingenious theory of Professor Liebig". But we can scarcely yield him credit for having demonstrated this to be the case. From this table we learn that "in acute fever & inflammation", in both of which according to Liebig's theory uric acid should be decreased, that an actual increase

of this substance obtains. Admitting this then to be the case, does it invalidate the hypothesis which we have adopted? We think not. In the inflammation recorded in the table (Acute Hepatitis) we have, it is true, increased rapidity of circulation and greater frequency of respiration; but these respirations are, owing to the pain excited by the depression of the diaphragm upon the inflamed viscus, small and furnishing but little oxygen and as a consequence we would be led to anticipate the result given by Becquerel. Again, may not the condition of the diseased gland determine the result of a more highly carbonized body- hippuric acid for example- by which to rid the system of retained Carbon and thus in some measure prevent the formation, or appearance, of urea? In fever too, in the normal quantity,

may we not, with reason, suppose that the Extraordinarily rapid waste of tissue consumes in its first stages all the inhaled oxygen leaving none for secondary formations? The phrase "acute fever" is, however, so indefinite and vague, including so many and opposite pathological conditions that we hardly would expect its use in the discussion of a subject where precision and accuracy of expression are so much required. How vast, for instance, the ~~[illegible]~~ difference between the lesions in Intermittent and Typhoid, in Ephemeral and Remittent Fevers! And yet all of these are "acute fevers". Under such widely different conditions of the system it would, we think, be unreasonable to expect the obedience of the economy to any one and fixed law of Chemistry or Physiology.

The cases of Chlorasis too cited in the table before mentioned are of not even the slightest value in discussing the merits of the Theory, since they give but the maximum and minimum of a certain number of cases, and in which the quantity of uric acid is in the one decreased and in the other increased — the one subverting the other serving only more firmly to establish the truth of Liebig's views! Jonson, in his Chimistry, adduces two observations made by Bird himself — one of Chlorasis, and another of Anæmia in both of which uric acid is in increased proportion. In the case of Chlorasis the urea is set down at 231 grs. while the quantity of uric acid is as high as 25 gr. — a trifle increase of the acid while the urea is

much below the norma. In the case of Anamia the urea was excessively low being only 162 grs. while the acid rose to the amount of 9 grains.

The cases of L'Heritier, given by the same authority, show from observations of Eight uncomplicated cases of chlorosis a mean proportion of urea represented by 6.6, & of uric acid designated by .2 giving an evident excess of the latter over the former body. Phthisis, also, supplies the opponents of this theory with an imaginary objection to its truth. Gerding Bird (opus citato), however, removes all grounds for such opposition by stating that, in a conversation with Liebig, this chemist stated to him his reference to "the early stage of tuberculisation" in his assertion of the diminution of uric acid in Pulmonary Phthisis.

Indeed, when we consider the small amount of available pulmonary surface offered, in the advanced stages of this disease, for the oxydation of the blood discs and the decreased proportion of these cells in the blood, we cannot imagine how any one could Expect to find a diminution of uric acid in the urine. Liebig adduces the urine of carnivorous animals as a proof of his assertion and shows thereby the Effects of greater or less oxydation in determining the presence of urea or uric acid. Of these he instances the lion and tiger, animals whose food is almost entirely nutritive, (being for the greater part nitrogenized) and whose respiration and waste of tissue necessarily are very great, and in their urine, he states, and the fact is notorious that are almost entire

absence of the acid, while an enormous excess of urea is found. On the contrary, the carnivorous reptiles with the same aliment, but leading a life of almost constant inertia, being cold blooded and slowly respiring, and drinking but little, receive too little oxygen to convert their uric acid and it is thus thrown off, as such in their solid Excrement. But, Exclaim the opponents of this theory, the carnivorous birds fulfil, to the highest degree, the conditions required by your position for the absence of uric acid, and nevertheless this substance constitutes the great bulk of their urinary excretion! This, we confess, is one of the most plausible of the objections with which this theory meets: but, like the others, it too, we think may be explained away. Under the title "carnivorous birds" are included the piscivora

and the Carnivora proper, and in the urine of both these classes we acknowledge the predominance alleged. Indeed were such not the case, we should be much more surprised than at the existing state of affairs. The formation of uric acid & its subsequent change into urea depending on the supply of a given amount of oxygen, whatever tends to cut off this supply must, a priori, prevent the conversion of the acid into the latter substance. Now fat, being composed almost entirely of Carbon ($C_{11}H_{70}O$) and being subservient to no other purpose of the Economy than that of Calorification, requires, for its combustion, a very large amount of oxygen. The food then of the piscivora consisting entirely of fish, into the composition of which a very large amount of fat enters (a

consequence of their small supply of oxygen) added to the very quiet habits of these birds, e.g. penguins and pelicans which pass the greater part of the day at rest, affords us a very satisfactory explanation, & quite consonant with our hypothesis, of their apparent deviation from this law. The objection in the case of the Carnivora proper yet remains. These birds too lead a much more quiet life than is generally supposed, remaining for hours in a state approaching torpidity after glutting themselves at their repast & their state of action consisting principally in the circular hovering motions which they execute, for which but a small expenditure of force is required. Another cause for their excess in formation & excretion of uric acid is the small

quantity of fluid which they take, thus not affording sufficient water in their blood for the solution of this substance & thereby preventing its oxydation. Added to these reasons will be found another in the fact that the Elements for the support of animal heat are chiefly to be obtained in the fat already Existing in the system, or in the carbonaceous matter of the ingesta. Now these birds have no deposit of fat in their bodies which may be consumed for this end, and but little is taken in their food, Thus the result will be the combustion of their proper tissues and in this process all their oxygen is required.

The daily quantity of uric acid excreted by a healthy man amounts to about eight grains. Prout thinks that the greater part of this exists in combination with Ammonia as

a salt of this base, with which, according to his before-mentioned theory, he believes it meets at the moment of the disorganization of albuminous structures. His theory however with regard to the formation of uric acid is evidently false, since it would ensue therefrom, that, in those cases in which it is in excess, the albuminous elements of our frame were undergoing combustion far more rapid than the gelatinous tissues, and conversely: this seems, at least, improbable. Consequent on the fallacy of his proposition, all deductions therefrom must, of it, be erroneous.

G. Bird supposed that "uric acid, at the moment of its formation, meets the double phosphate of soda & ammonia derived from the food, and forms urate of ammonia evolving phosphoric acid which thus produces the natural acid

reaction
of urine". Now the presence of ammonia
in the blood is by no means satisfactorily
ascertained — it being in those cases of
analysis of this fluid in which has been
detected, much more probably a pro-
duct of chemical change, than an educt
from the analyzed blood. We should thus,
it seems to us, be very cautious in the
admission of such theories, and indeed
we doubt exceedingly if ammonia is
ever present in <u>healthy</u> urine; <u>its pre-
sence being always due to decompo-
sition or a deranged state of the depura
functions</u>. Prof. Liebig bases on the alka-
line reaction of phosphate of soda the
opinion that the uric acid exists as an
urate of soda, which base it had ab-
stracted from the phosphate, but
that, on cooling the PO_5 reacts on the urate
by which about one half the uric
acid is deposited. This readily explains

the acid nature of the urine. As we have before asserted, the ingestion of food & drinks rich in carbon, by the heat which they create for the consumption of oxygen, present favorable conditions for the formation in excess of this acid and the reason for this, by the adoption of the theory of Liebig, is at once simple & forcible. But if, with physiologists of celebrity, we attempt to go further and show the influence of other kinds of aliment upon this, and other elements of the urine, we must confess ourselves in want of any physiological facts explanatory of such influence. And indeed if we consider well the laws which govern the economy, we will find ourselves strangely puzzled to account for the statements which have been made with regard to the relation between the food and urine.

One of the fundamental laws of physiology denies the influence of chemical action upon vitalized matter: and our very definition of Life, as a state of resistance to chemical affinities, is confirmatory of the rule. This being then established the only source to which we can look for the formation of the elements of the urine must be the decay of the innervated and lifeless atoms of tissue and these alone are the pabula for its maintenance. The food taken into the economy then, in order to become subject to the chemical changes necessary for the formation of urea & uric acid must first have become vitalized, have been deposited as the substance of organs & in its turn have yielded up its nervous influence — its life. It is hence impossible that the ingestion of azotized food should exercise the

slightest influence over the nature of the secretion, since, to do so, it must just have called for a greater or less destruction of tissue than in the normal condition — an hypothesis too absurd for a moments serious reflexion. The experiments of Lehmann (quoted by Bird) would seem to contradict this opinion, yet, if we will ponder their experiments & view their contradictions, we will, if we do not consider them among absurdities, at least acknowledge the possession by their author of a most comical and truly wonderful pair of Kidneys, which, with a diet void of azote, can secern more urea & uric acid [redacted] than any other pair in Christendom. It will be supposed, from what we have said, that the quantity of uric acid varies more or less from

* Which deprive uric acid of its base, a conne-
tion with which is necessary for its read
solution.

the healthy standard in different conditions of the system. It is in Gout particularly that uric acid plays an important part. This disease generally affects those individuals who, consuming much food, in the preparation of which much fat is used, & indulging in large potations of acid wines* and spirituous drinks, remain at the same time in a state of inaction, thus receiving into their systems but little oxygen & having as a consequence much uric acid formed in the economy. This substance, after a long period of accumulation in the organism, at last exists in too large a quantity to be held in solution by the blood and is finally deposited as urate of soda in the articulations and sheaths of tendons, constituting the calcareous deposits, or chalk stones. After this deposition

the acid, which had, previously to its occurrence, been in great excess in the urine, suddenly falls to near the average quantity. With this paroxysm too there is generally an alleviation of the distressing symptoms under which the patient was laboring & the constitutional disorder is converted into a local malady (Prick). Impairment of the Cutaneous function - the outlet for a great part of the azote of the system - brings with it an excess of uric acid Consequent upon the great amount of nitrogen thrown upon the kidneys for elimination & of which they rid themselves partly in this form. The amount of this substance is also increased in diseases of non-oxygenation as in Anæmia & Chlorosis, and of this the reason is evident. In diseases also where the destruc-

tion of tissues is excessively great and rapid as in uncomplicated Fevers, and in some of the Phlegmasiæ more especially those affecting the respiratory apparatus or affecting its integrity, and in Rheumatism we again find uric acid in excess. A decreased amount however of this substance in the urine, does not, with Certainty, indicate a decrease in formation; since an increased quantity may be separated from dead tissue without its appearance in such quantity in the urine owing to some functional change in the Kidneys. Again in Albuminuria we have a normal amount of this acid formed in the blood, but, owing to the degeneracence of the cortical or secernent structure of the Kidneys, these organs do not secern from the blood this acid, as is their wont, when presented to them,

and as a consequence, but a minimum appears in the urine. An actual decrease from the normal amount of this mode of destruction occurs in Diabetes & Oxaluria. In the former of these diseases we have no uric acid because the material required for its generation is appropriated in the formation of sugar. In oxaluria its presence in so small quantities is traced by Liebig, with how much truth we cannot say, to want of oxydation, by which uric acid is, instead of its normal conversion into urea, metamorphosed into oxalic acid. We have already shown that for the conversion of uric acid into another healthy product a definite amount of oxygen is required, and unless the supply is proportionate to the demand a less degree of oxydation occurs, resulting in the formation of abnormal bodies in proportion to the material

for Eremacausis. Amongst these heterologous formations is found oxalic acid, in conjunction with urea in excess; the formation of which is thus conceived by Liebig (p. 131) "When uric acid is subjected to the action of oxygen, it is first resolved, as is well known into alloxan & urea. A new supply of oxygen, acting on the alloxan, causes it to resolve itself either into oxalic acid and urea into oxaluric & parabanic acids, or into carbonic acid and urea." Thus:

	C	N	H	O
1 at. uric acid	10	4	4	6
4 " water			4	4
3 " oxygen				3
	10	4	8	13

=

	C	N	H	O
	4	4	8	4 = 2 atoms of urea
	6			9 = 3 " oxalic acid
	10	4	8	13

In a recent conversation with my friend & preceptor Dr. Frick, to whose kindness I am indebted for many of the facts stated in this thesis, this gentleman informed me that of the confined convicts in our State prison a large majority present oxalic urine, while those who are, from the nature of their

* Dr. Forbes's Cases - manuscript.

occupations, employed in the prison yard;
such as blacksmiths, stone-cutters and errand
runners, are exempt from this condition.
He further informed me that, having for
experiment sake caused some of these
latter patients to take daily doses of
cod liver oil, which acts as any other
fatty matter, he found crystals of
oxalate in their urine. These state-
ments thus tend directly to prove
Liebig's views; but the action of nitro-
muriatic acid, the remedy generally
exhibited in oxaluria, in restoring the
normal quantity of uric acid in the
* urine, if brought about as is supposed
by the action of its oxygen, would, me
thinks, invalidate the theory, since by
Liebig's own statement, increased
oxygenation should have bring with
it, not the reduction of uric from oxalic acid,
but the further change from alloxan into urea.

Urea.

In our considerations of the formation of uric acid we found that it was converted by oxygenation into a basic substance called Urea. From the chemical composition of this body, ($C_2 N_2 H_4 O_2$) it will be perceived to contain a very large amount of nitrogen; and it is through this channel that a very great part of the azotized results of destruction are removed from the system. Indeed so far is it dependent for its formation on Emaciation, that, were it not, in a degree, influenced by some of the ingesta, its amount in the urine would be a pretty accurate criterion by which to form an estimate of the actual wasted tissue. The quantity excreted by a healthy man amounts to about 270 grs.; This amount is subject to extreme vicissitudes, since its formation holds a con-

stant ratio to oxygenation, and because,
the Skin and Kidneys performing nearly the same office, and being mutually compensating organs, any deficit in cutaneous exhalation brings with it a corresponding increase of azotized excrementa to throw off which is the province of the Kidneys. Any cause, then, cutting off the requisite supply of oxygen from the decaying tissues must [illegible], bring with it a decrease in the quantity of this substance; while any obstruction to the proper performance of the cutaneous functions will have an opposite effect. We have before alluded to the ascribed influence of azotized food upon the quantity of urea formed & have given our reasons for its denial. But though the quantity of Nitrogen thus introduced has

no control over this substance, it, in common with uric acid, is undoubtedly affected by carbonaceous food. The quantity present in the secretion is also said by Lécanu to vary with sex & age: being greater in men than in women & to exceed in the urine of children the quantity passed in the secretion of aged persons. Owing to diminished perspiration & increased respiration, the quantity of urea is greater in winter than in summer. Allied very closely in chemical composition to carbonate of ammonia, urea, by decomposition is most readily converted into this salt.

$$\left.\begin{array}{l} \text{C N H O} \\ \text{2 at. Carb. ac } 2 \quad 4 \\ \text{2 " amm. } 2\ 6 \\ \hline 2\ 2\ 6\ 4 \end{array}\right\} = \left\{\begin{array}{l} \text{C N H O} \\ 2\ 2\ 4\ 2 = \text{1 at. urea} \\ \qquad 2\ 2 = \text{1 " water} \\ \hline 2\ 2\ 6\ 4 \end{array}\right.$$

The ammonia thus formed by this chemical change, having a greater affinity for phosphoric than carbonic acid,

mand, if liberated in secreted urine, unite with the former acid in its super salts & set free the carbonic acid. Now, in depositions of the phosphates, this is actually taking place, and since the phosphatic salts are insoluble in alkaline urine, a condition to which the saturation of the urinary acids & further liberation of ammonia give rise, they sink to the bottom of the vessel, if already secreted or in the bladder if decomposition be due to internal causes in the form of white crystals of different classes. We expressed, in the chapter on uric acid, some doubts, en passant, with regard to the existence of ammonia in healthy urine & although the assertion is not supported by experiments, since we have had no opportunity for establishing them, still, granting that ammonia is found in

the blood, the only source from which it is derivable the fact that it is thus in combination with lactic acid (as is asserted) just as it is as we think in our opinion. That ammonia is frequently, may in a very large majority of cases, found in the urine it would be absurd to deny: but we think that in all these its presence is due to some morbid action, and that impairment of the dermal function, or the decomposition of urea is, in every instance, the cause of its formation therein. As a general rule, it may be stated that in the cases in which uric acid is in excess urea is diminished and vice versâ.

February 1st 1850.

D J McKim

A Dissertation

on

The Study and Practice of Medicine

Submitted to the Examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland

For the degree of

Doctor of Medicine

by

Charles H. Keyser

of

Baltimore.

Maryland.

Study and Practice of Medicine

Behold if you please the Student of Medicine. He has just commenced his career in that path of science which though here and there hedged in by thorns and thistles is nevertheless beautified by many a lovely flower. His progress is slow and tedious. he finds here a hill, and there a precipice, and yonder a mountain to scale. But he seems to have started with a full determination to surmount them all. Noble Fellow! Thou hast commenced a journey on a road that has often been trodden before: many are now on the way. Some have travelled it from the morning of their days until the shades of evening, and yet

are lingering far from the top. Others having made rapid strides in the vigor of their manhood, are to be seen far in the distance, passing, perhaps, thousands who had the start of them. Yet peradventure, they tarry to gather a few flowers, form a few wreaths, and set up some landmark for those in their rear; when the clouds gather in, darkness prevails, their path becomes obscured, and they are compelled to leave much unaccomplished. Hence it behooves the student to be diligent; his time is precious. Am I unintelligible? I will endeavour to be plain. A student picks up a work on Anatomy: he scans page after page, there is much to interest, much to perplex him. Yet having a definite object in view, he is untiring in his exertions. ——

The morning dew gilds the eastern sky; the dew-drops give freshness and beauty

to the rose; the birds sing; the rivulets move playfully on their way; the Cataract Thun=
=ders; all nature seems animated. But what are all these to the Student of Medicine? They are well enough in their way; but his theme is man; not in the abstract, but man as a tangible, living being: Man in the vigor of health and the debility of disease.

He learns the names of the various parts of the Bony Skeleton; has some idea of their physiological adaptation; next the ligaments, muscles, blood vessels, etc. Thus far all is plain, though perhaps tedious. As yet he has to deal with well authenticated facts. That is if the general opinions of all great Anatomists, agreeing in things apparently plain, can be considered in that light. Yet it is true that even now he sees some things clothed in theory and hypothesis. For this seems to be

almost a universal tendency in human nature to supply a deficiency of truth, by a multiplicity of falsehood, or what amounts to the same thing, a disposition to account for every thing, but an ability to accomplish but little:— Hence fact and hypothesis are strangely commingled. Pardon me, reader, when I say, not maliciously or decantingly, but with a sense of its justness, that this medley of truth and supposition finds as wide a [illegible] in the medical science, as any where else. God forbid that I should speak harshly of an art whose object is so noble. But in the spirit of candour, I think it must be granted that from the very nature of things this is the case.

Well we glanced at the student in his study of the principle parts of the human frame. Now comes Splanchnology

Here is so much that is new, and strange, yet simple, that the study which he was disposed, but a short time previous, to consider as dry and irksome, now seems truly interesting. —

Few persons I imagine seeing or reading of the various organs of the human body for the first time, can fail to exhibit a marked curiosity. But when they advance farther and gain a knowledge of their physiology, with what feelings of delight do they yield their former crude and imperfect notions of human Anatomy. For imperfect they must necessarily be, until matured by proper training. We will suppose now that he has a pretty clear idea of Osteology, Synchondrology, Myology, and Splanchnology, then comes the last though not least, yet worse understood division of Anatomy — Neurology. The student cannot be too seriously impressed with the importance of a knowledge of the nervous system.

it is in and through it that the manifes-
-tations of almost every thing belonging to the
human system is made evident. Notwith-
-standing its great importance there is no
other division of Anatomy, the phylosophy
of which is so imperfectly understood.
Hence, I do not wish that the Student,
in being impressed with the importance
of such knowledge, should really
neglect other things that are of more
immediate importance. Far from it: but
what I am endeavouring to arrive at, is,
that though in the brief time allotted
us we are judiciously advised to give a
knowledge of the most useful and best
established principles of the Science,
yet that we are not to look upon a know-
-ledge of the Nervous System as of trivial
importance: but on the Contrary, should
carry with us, from the halls of Medical
instruction, a determination to learn

what has been, and what is yet to be established, in regard to the nervous system. For assuredly this is a field upon which the rising generation of the profession should early endeavour to take an interest.

Not that they are to reap immediate benefit from such a course, or that they are the most competent to handle the subject: but for a profitable investigation of such an abstruse, yet really important branch of Medical Science, I deem it to be highly necessary, that its Cultivation should begin in the spring time of life, so that by a long, and concentrated attention to the subject they may ultimately contribute something towards its advancement. —

I repeat, that I am not, more than any one else, in favour of a student in the short time allotted him for the completion of his preparatory studies,

neglecting really practical information,
for a knowledge of this; but merely that
he should not, as many do, consider
such knowledge as of little value,
because he is not required to be thoroughly
acquainted with it whilst yet
preparing for the Green Room!

Our Tyro having made himself
master of the principal parts of Anatomy
and physiology, next commences Surgery.—
He is at once delighted with the apparent
simplicity of its principles; and in his
inexperience, wonders why it is that there
are so few good Surgeons, when the rules
specified for their guidance seem so
plain.— little does he suspect that
even the authors of some of his best
text-books are more successful in the
flourish of their pens: than they
ever were with their Knives.——
The application of a ready writer upon

Surgery, and a skilful Surgeon, is a natural inferance on his part.

How many visions flys before our novice in Surgery. Page after pag is turned over, each succeeding one more interesting than the preceding: his mind is filled with 'aspirations,' he gives freedom to his thoughts, when, behold! he is in imagination, summoned to some great man, surrounded by his friends, whose life can only be saved by an amputation of a limb. The operation is performed, and by him. His praise flies upon the wings of the press thoughout the length and breadth of the land. What a glorious vision, to be sure! Read on my good fellow: it is well that you should have some beacon light, if only a phantom to stimulate your progress. May the Goddess of success be always with you, and your grandest anticipations

be fulfilled. —— One author on Surgery is finished: another began: The second performs operations differently from the first; he differs in regard to the proper time for their performance; also as to the fit subjects for such operations. He claimes, and probably, justly, the usual success in the practice of the art according to his theory and experience. The Student is perplexed: a question arises in his mind if this, the best founded and simplest of the divissions of Medicine, is really as represented. He Consoles himself, however, with the fact that he is not bound to adopt for his Standard in practice any thing but what may appear to him the best. He is now getting a better incite into the Claimes of Medicine to the rank of a Science; and to know that unlike most collateral Sciences, she has not many

well founded principles, but leaves her paramours great latitude for the execution of her precepts. ——

Next comes Obstetricks. It is natural that he should become pleased with this ales. He is by this time better prepared to appreciate this branch of Medicine. There is much here for reflection and instruction. For, though this division of the medical art was by the Royal Colleg of Surgeons in England, not many years since pronounced to be unworthy of the study of gentlemen; and actually carried out this view by prohibiting their degree to be conferred on an obstetrician, yet time the rewarder of all thing has shown this to be one of the most important, as well as interesting parts of medicine. And at this present day, no man is estimated more highly, at least in this Country, than

eminent Obstetricians. And so it should be;
for it requires one well skilled in the art
to be able to know, not only what to do for the
suffering woman, but also, and not less
important to know, when to refrain from
doing. And surely no mean preliminary
education is necessary to befit a man
for all the trying duties of a ly-ing-in
chamber. As in the course of his practice
it becomes obligatory on him to mingle
in every grade of society, and exclusively
among that sex most entitled to the
demands of chivalry, and politeness. He
must be one of no mean address or
accomplishment. And above all, he
is the man from whom the agonising
and despairing female is to receive
words of comfort and consolation.
And will it now be said, that one
from whom so much is expected, is
not entitled to the rank of a gentleman?

Well then, this is a branch deserving of as serious a consideration by the Student as any other. In regard to the various divisions and subdivisions as given by different Authors, he need only exercise his judgment to discriminate the useful from the useless. And I feel assured that no Student, at the present day will neglect this all important branch of study; that is provided his intention is to practice in civil life.

How is it with Materia Medica? This department of Medical Science has great claims on the attention of the Student. To adopt the language of an eminent Professor of a neighboring School, we may remark: "As well indeed might a mechanic attempt to carry on his operations without an acquaintance with his tools, as we to exercise our profession ignorant of the properties of our remedies"

But it is not necessary for me to insist on the value of this branch to the Student I believe that there are but few that are not aware of its importance. But what I wish to urge is, that more attention ought to be paid to the physical properties of drugs. For independant of the advantage that such a Knowledge would be to the practitioner by preventing him from being imposed upon by an ignorant or dishonest Apothecary, he by such an acquaintance becomes familiar with what he so often is called upon to prescribe. He only who has pursued this course can duely appreciate the advantages that the physician, who has studied drugs, not only in the abstract but in substance, has over the one whose information is obtained solely from books. To this class of the profession I appeal for a confirmation of what may,

That ought by no means be neglected. Yet as the time adapted by the Student for his preparation for the "Green Room" is so very brief, I would advise him to pay most attention to the general principles of the science, and to the part that treats directly of the tests, antidotes, and incompatibles of such medicines as are at present in general use by the profession. More than this he cannot attain in the brief period allotted him; and at the same time to do justice to the other departments of the medical science. — We at length arrive at what may be termed the Key stone of our study, — the "Theory and Practice of Medicine". This is the grand embodyment of all the other branches. A knowledge of Anatomy, Physiology, Chemistry, etc, are to be viewed as only preparatory to this. With what delight it does the Student pursue this part of his study. If he has left it as the last branch of which

he is to become familiar, he desires no better
treat than Wood, Watson, or Elliotson. For
after all, it is disease and its treatment,
that is the grand object of all his study.
Yet how obstruse, obscure and contradic=
=tory are many of the doctrines laid
down for our guidance! "Physician
heal Thyself," is a good old proverb, for it is
a notorious fact, that we pride ourselves
on being able to cure others, when many
of us are afraid to administer to our
own aches & pains. How often is it, that
a physician is called to a medical
brother, who perhaps is on his dying
couch, and his disease being one of the
phlegmasia, it becomes necessary according
to the antiphlogistic theory to purge, bleed,
blister, etc. As you hear the expiring
Escupapius say, I want none of your drugs:
a little ice to cool my parched lips, is
all that I crave. Nor need we go to the

bed of death to see such evidence of disbelief
in Medicine. How often do we hear prac=
=titioners of eminence acknowledge their
incredulity of the very art, by the practice
of which they earn their daily bread.
But then we also know that intelligent men
phylosophers if you please, are every day
disputing about the plainest things in
Christendom. Therefore it behooves the
novice to be slow in advancing any
argument pro or con the medical
science. The skeptic in medicine
should among other books read Prof.
Barthets phylosophy of Medicine, he
will there find a candid and just
view of the claims of medicine as
as a science. The author of these
scintilations of the mind, would merely
add, that he is thoroughly imbued with
the propositions put forth by Dr Barthet
Again, I have heard it said, that no man

can test another's qualifications in that branch of medicine called "Theory & Practice" hence say they, and the proof of it's humbugery: but it is false, There are principles in medicine that are as universal in their application as the most of those in other divisions of physics. On the contrary a deficiency of such knowledge in a candidate for diplomatic honours, can, and will be, detected not only by the Profrs of this and that particular school, but by Medical men of standing in any County. There are few writers but what agree in most of the Cardinal points of medicine: But because we cannot cure a confirmed case of consumption; or command the dying to rise and walk, are we to be stigmatised with the name of humbugs? However there is some truth in the saying, "that a man has pleasure in the study of medicine

and the practice of Law; but the reverse is a very different theory. To unto that young man who commences the practice of Medicine without some of the "ready chunk" to pay his way for the first few years. How many have in imagination figured to themselves (Pardon me gentlemen) a fine buggy, a fine horse and a practice equal to Dr. Smith; and have in the course of a few months become disheartened, and have sought some more lucrative employment. At the present day, when every physician who has a dozen families, or who has none, (it matters but little) to attend must have a buggy, to dash through the streets with, it is no wonder that young men collaguer thus? The practice of Medicine is surely very pleasant and profitable, for behold! how busy Dr. Mc. is and with what fine style he trips along the street. Why two years ago he was a clerk in Mr. B's store at a salary of three hundred dollars per annum,

I believe I will study medicine. Hence year after year the halls of medical science send forth upon the community scores of hungry doctors; and the cry is still they come; Hence the strife and discord that arises, when the gaudy shingle of Dr. So and So become next door neighbours; when perhaps there are not more than a dozen pay families in the neighbourhood. Such seems to be the state of things at the present day. How then can I aspire to a life of ease and pleasure to the tyro in medicine. Let every one that selects medicine as his study rest assured, that as far as improvement of the intellectual and moral faculties are concerned, he has selected a most noble profession; but if he desires to accumulate wealth, he had better emigrate to the golden regions of California.

An Inaugural Disertation On the Signs of Pregnancy

Submitted to the examination Of the Provost Regents & Faculty of Physic Of the University of Maryland For the Degree of Doctor of Medicine

By

Robert G. Rankin
of Palto County
Maryland.

The rules and regulations of our medical institutions being such as to require an exhibit of something in shape of a thesis from every student, who would offer himself, for examination in order to his obtaining a diploma. I have therefore chosen as a theme to the following, brief and no doubt ill digested treatise.

The signs of pregnancy.

Taking into consideration the immmerable hosts of graduates that are ushered forth every year from our different Medical institutions, each producing a thesis written on some subject relative or pertaining to the pro-fession. It cannot reasonably be expected, that a young man

in this age of the world, be his talents what they may, or his knowledge of the theory of medicine ever so great, can advance any-thing new on the various branches belonging to science of medicine, or manner of treatment of any of the diseases incident to the human family, other than such as he may have collected from the different authors he has read, or had propounded, or elucidated to him by his immediate preceptor, or the faculty, whose lectures he has been attending.

The science of medicine has ever been held as unfathomable, and the study, therefore, a progressive, and interminable one. It therefore becomes a young man who would aspire to any degree of eminence

in his profession, to be indefatig
-able in his studies, endeavoring
to collect with persevering industry
those theorys and knowledge which
are necessary to fit him to appear
with distinction on his entrance
upon the public theatre of life.
For most assuredly young men
over anxious to make a public
display of their talents, by entering
on the acquisition of the pitiful gain
that is obtained by a hasty and superficial
study of their professions, will march
through their whole course, with
feeble, nerveless, and obscure efforts,
which if they do not cover them
with contempt will at least
leave them sunk among the
vulgar throng who make up the
mass, or drag at the Tail of the

profession. As in medicine so in all other sciences. What was it but indefatigable study and persevering industry the gave Demosthenes, such an ascendency over all the corrupted politicians and noisy demagogues of Athens, and obliged even the most polished orators, who knew only the modulation of periods, and charmed the ear without enlightening the understandings, yield to his superior illumination and energy. But this perhaps may be considered a digression from my subject.

As the signs of pregnancy are numerous, arising from various causes, I will therefore make mention, of a few of the most prominent. and endeavor to

elucidate. and apply them as well as my abilities may enable me. The first and most usual is the interruption of the menstrual discharge, and it is well known that this cessation may proceed from various other causes. such as exposure to cold and damp at the time they are about to appear. or shortly after they have appeared, or they may be suppressed by some disease of the ovaries. or of the uterus itself. or by certain chronic affections. or by some depressing passion. or emotion of the mind.

Again we have nausea and vomiting as a sign. but these may be readily produced. by other causes. they not unfrequently come on through

sympathy, where the menses have been arrested, from some other cause than that of conception, as the stomach does more or less sympathize with the uterus, in all its various changes and affections.

The general condition of the pregnant female is plethoric, the pulse quick and full, and there is said to be an increase of fibrin.

Again we have morning sickness as an other sign. This generally commences from the sixth to eight week after conception, it does appear sooner or later in different females. it generally ceases at or about the end of the third month. We sometimes find the sickness without pregnancy, and vice versa

Again from two to three months after conception the female begins to experience sensations of fullness and throbbing about the mammary glands, and they present to the touch, a glandular & knotty feel; and at or about this time there is a milky watery fluid secreted, but it must not be forgotten that these changes in the breasts, may arise from other causes quite foreign to pregnancy. The glands may undergo the same changes from distention of the uterus, by hydatids etc through sympathy.

The areola around the base of the nipples, presents a darkish appearance and there is generally found a number of papillae, projecting from the dark surface, from one sixteenths to the eighth of an inch, varying in number from ten to twenty or more

and when the breasts have become hard and full, large veins may be seen ramifying over their surfaces, and about the end of the fifth or sixth month. There also may be seen a number of silvery streaks, nevertheless. The glands may present all these appearances without pregnancy. The milk may be secreted by the application of a child to the breast, or it may happen during the catamenial flow or it may remain for a long time after the weaning of the child.

Again another sign, is enlargement of the abdomen, which during the first month of pregnancy increases by degrees, owing to the intestines being pushed above the pelvis, and about the fourth month the womb ascends above the symphysis pubis.

and still later when the uterus ascends higher in the abdomen, the umbilicus protrudes forwards beyond the level of the surrounding skin, the uterine tumor becomes hard, and elastic to the touch, so that it is very different from that it presents, when the abdomen is distended with flatus, The best way to examine the uterine tumor is to cause the patient, first to stand up, then to lie down, by which process we will be better able, to ascertain the shape and form of the womb, than otherwise, were we to keep the patient in one position, during the whole of our examinations.

Percussion will sometimes enable us, to distinguish pregnancy from tympanites, as we are liable sometimes to mistake the one for the other.

Again should the female spit freely, and the sputa exhibit a white frothy appearance. it is looked upon as a very strong but not infallible sign of pregnancy. The saliva is very tenacious, and difficult to discharge from the mouth.

Ulse sometimes have salivation but this like the last is not a constant sign. The irritation caused by pregnancy, may affect the salivary glands and produce this sign, and this has been considered by many of the earlier writers as a prominent sign, but I think our modern writers are not inclined to place so much reliance on it. The ptyalism is easily distinguished from that produced by mercury.

Quickening is popularly considered

as an infallible sign, but the pro-
-fession consider it of little or
no importance.

Ballottement is another means by
which we may satisfy ourselves to
a greater or less extent with regard
to the existence of pregnancy, this
may be performed by placing the patient in
an up-right position, then by
introducing the finger, and placing
it upon the base of the cervix uteri
and the sametime endeavoring to keep
the uterine tumor steady, with the
other hand, then by a slight and
sudden jerking of the finger up
-wards, we may feel that something
has receeded from it: and which
we can perceive to fall back upon
it: if the finger remain a short
time, the period when this test is

most likely to succeed is from the fourth to the sixth month of utero gestation.

Auscultation sometimes aids us in our diagnosis. There has been three sounds represented as being heard by auscultation, the first is the sound of the fetal heart. The second is a whirring sound which has received the name of bruit placentaire, from the belief that it proceeds from the placenta. The third is the pulsation of the funis umbilicalis or bruit de diable. In order to make an auscultatory examination the patient must be placed upon her back, with her abdomen covered with a thin cover, and the head slightly elevated in this way we may obtain access

to all parts of the uterine tumor unless it be posteriorly. and that can be examined by turning the patient a little to one side. Then we may apply the naked ear to the abdomen or we may use the stethoscope which is considered preferable, as it enables us to define and limit, the sounds which may be present, and it is also in most instances more convenient. The practioner should then place himself in the most convenient position and be careful not to place his head in a depending posture, else he may mistake the throbbing of his own arteries for the sounds communicated from the foetal heart or arteries. The pulsations of the foetal heart

present quite a different sound from the others. it consists of a rapid succession of short regular pulsations, somewhat resembling those of the adult except not quite so strong and more frequent they average from one hundred and twenty to one hundred and forty in a minute. The pulsations are more frequently heard in the middle or inferior abdominal region, and more frequently on the left side, the period at which these pulsations are said to be most commonly detected is from the third to the fifth month. The pulsations when distinctly heard are generally held as a positive sign of pregnancy.

The next in order, is the uterine souffle or bruit placentaire. This is said to be a single intermitting sound heard over the uterine tumor, this like the last

generally becomes audible about the fourth month, though some writers have given it an earlier date, others later, The third sound, is the pulsations of the umbilical cord, or bruit funique, if the position of the funis be favorable, it is quite possible to hear the pulsations of its arteries, corresponding to those of the foetal heart. These are the three sounds said to be heard, when auscultation is performed.

The existence of Kiestine is another sign of pregnancy, by this we mean a gelatino albuminous substance, existing in the urine, subsequent to the first month of pregnancy, this separates from the urine by rest forming a pellicle on the surface, and is held as a strong indica-tion of pregnancy.

There is another interesting, and not-

unfrequent occurance, which I must in conclusion advert to, It is that of twin pregnancy, the signs of which every accoucheur should be familiar, in order to qualify him for becoming a successful obstetrical practitioner. There has been great reliance placed upon the disproportionate size, and flattened appearance of the abdomen it appears as if it was divided into two halves, and very unequal over the surface, although the abdomen of a pregnant female may put on all of these appearances, still they are not to be relied on as infallible signs of twin pregnancy, as they may be occasioned or produced by other causes. I believe the strongest sign and one most to be relied on, is that ascertained by auscultation, viz The distinctly hearing the pulsations of two foetal hearts.

I have now enumerated and brought to

view, the most prominent signs of preg-nancy, so far as my recollection has served me. and such as I hope will be approved of, and sustained by the faculty to whom this short essay is dedicated, and whose masterly, lucid, and instructive lectures I have for two successive sessions been attending to.

I have reviewed the signs and classed them in the following order. Viz.- In the 1.st place I have noticed the interruption of the menstrual discharge.

2.nd The condition of the pregnant female.

3.rd Morning sickness.

4.th The various changes which the mammary glands undergo.

5.th The enlargement of the abdomen

6.th The spitting of frothy saliva.

7.th Salivation

8.th Quickening.

9.th Ballottement.

10.th Auscultation.

11.th Pulsations of the foetal heart.

12.th Uterine Souffle or bruit placentaire.

13.th Bruit funique.

14.th The existence of Riestine.

15.th A few remarks on the signs characteristic of twin pregnancy.

I will here conclude with a few reflections on the medical profession. The profession of physician in all ages and countries, being held in great estimation, by reason of its intimate connection with the welfare of mankind. The cure of diseases, the restoration of health and the saving of life, are the objects to which the attention of the physician is directed and he cannot fulfil his important duties, without possesing requisite degree of

Knowledge, and exercising a due degree of judgement, and sagacity, destitute of the aids. which books, lectures, and observation, afford, he can never acquire the principles of physic, understand the structure of the humman frame develope the causes and seat of diseases. and become acquainted with proper remedies to remove them.

An
Inaugural Dissertation
on
Typhoid Fever

Submitted to the examination of the Provost, Regents
And
Faculty of Physic
of the
University of Maryland
for the degree of
Doctor of Medicine

By
George W. Heagy
of Carroll County
Maryland.

To. Dr. Chew

As a mark of respect
for his high standing in the rank
of his profession, and as a token of
regard for the great pains he has
taken, to render those subjects clear and
easily comprehended, which to the
Student often appear difficult and
perplexing. this dissertation is most
respectfully inscribed by his friend
and pupil G. W. Heagy

As it has been the established custom of the University of Maryland, since the time of its organization, to require of its candidates for graduation a thesis written on some subject connected with the Science of Medicine, it becomes my duty to conform with this requirement. I have therefore selected as the subject of my dissertation typhoid fever, not with the hope of advancing any new ideas as that with my slight experience would be vain and presumptious. But knowing that in this country it is one of the most common and fearful diseases with which physicians have to contend, I think it of the highest importance that all who are about engaging in the practice of Medicine should be well acquainted with its lesions, Symptoms, diagnosis and various methods of treatment.

This is the ordinary continued fever of the United States, and a large portion of Europe. These however are not the only regions where it is found, as it is supposed to invade all inhabited countries. It has been long known and described under many and various names. We find it described by the older authors, under the names of typhus mitior, nervous fever &c. the first to distinguish it from malignant typhus which they considered only a severe form of this disease, the latter in consequence of the nervous symptoms, which in many cases are so prominent. The first distinct account of its lesions, diagnosis and pathognomonic symptoms, was published by Louis in 1829. Dr. Nathan Smith in 1824 under the name of typhous fever published a very good description of the disease, as it occurs in this country.

Since the publication of Louis' work, several very good treatises have been written on the subject. In this country the works of Dr. Bartlett and Dr. Wood, give clear and distinct descriptions of the disease. Numerous as the titles are, which have been applied to it, there is no one upon which all have agreed. The names of follicular enteritis, entero-mesenteric fever, abdominal typhus, dothinenteritis &c. have all been applied to express the character of the intestinal affection. Dr. Wood has proposed enteric fever, this perhaps would be the best name we could apply, were there none in genual use. Louis called it typhoid fever, this is objectionable, in consequence of many other diseases assuming the typhoid character, but as it is generally known under this term we think it best in order to prevent confusion to adhere to it.

Symptoms. The mode of accefs differs very much. Most commonly we have the usual premonitory symptoms of fever, the patient complains of langour, debility, general uneasinefs, inability to labour, slight headache, the appetite is impaired, pulse increased, tongue coated with a thin white fur, usually a tendency to diarrhoea and epistaxis. These premonitory symptoms continue from three to seven days, when we have a chill followed by fever. The pulse now becomes increased in frequency, genrally dichrotic and gafpy. The skin is mostly hot and dry. Headache becomes very severe. The face presents an expreffion of dullnefs and prostration. The eyes are suffused, the cheeks livid, the tongue becomes pasty and furred. A bitter taste in the mouth. Generally delirium and insomnolence, delirium usually worse at night.

slight deafness, sounds in the ears and swimming in the head are very common at this stage. The abdomen becomes tympanitic. Gurgling is felt in the right iliac fossa, caused by the gas and liquid contained in the caecum. There is tenderness in the right flank and epigastrium. The diarrhoea is generally increased. Cough and bronchitis are common. At the end of the first week the rose colored eruption appears. This consists of a number of small red spots similar to flea bites, which disappear under pressure, but return as soon as the pressure is removed. They are mostly situated upon the abdomen, though they may appear upon the chest, limbs or face. The headache at this time generally diminishes or ceases, giddiness takes its place. The prostration is greater. The tongue changes, the papillæ become enlarged and elevated, it is dry and

tremulous and covered with a brownish fur, the patient protrudes it with great difficulty. The teeth, tongue and lips are covered with dark sordes. The dull and prostrate expression of the face increases. During the action ~~of the action~~ of the delirium the strength is often increased, the patient, unless watched during the night, will get out of bed and walk about the chamber; in the morning, after the delirium shall have subsided, he will again be prostrate, generally more than before the paroxysm. Sometimes it is of a low, muttering character, the patient picking at the bed clothes or at imaginary objects in the air. The secretions are all altered, gas is formed in the intestines, and the meteorism increases. The stools often become involuntary. The urine is scanty, usually high colored and often ammoniacal. The bladder sometimes loses its power.

The pulse generally increases becoming smaller and more dichrotic, though this is not always the case as it sometimes falls below the normal standard. There is complete loss of appetite. Thirst is generally very great, absence of it is a bad symptom. Placing the hand upon the patient we feel a peculiar burning sensation, called calor mordicans, this is most distinct upon the abdomen. Dysphagia is common during this second week, Eschars are apt to occur. Blisters or cups are very liable to produce sloughing. Hiccough, subsultus tendinum and twitching of the facial muscles are common. About the end of the second week the miliary eruption makes its appearance, this consists of a number of small, circular transparent vesicles, caused by an elevation of the cuticle by a limpid fluid. During the third week if the case terminate fatally

all the symptoms gradually increase in severity, until at length the patient is carried off, sometimes dying without a struggle. If it end favourably, the symptoms gradually ameliorate. The tongue moistens and gradually cleans, the pulse becomes slower and more natural, the appetite returns, the urine increases. Eschars if they have formed put on a healthy appearance. Tympanitic distension diminishes, and all the functions return to the normal standard. Though these are the most common modes of termination, they are not the only ones. Hæmorrhage or diarrhœa may carry off the patient very suddenly, or peritonitis may come on from perforation of the intestine. The symptoms of peritonitis are intense pain commencing at the point of perforation, quickly diffusing itself

over the abdomen. Chills or rigors appear. Pulse frequent and small. Nausea and vomiting. Increased meteorism. Cold and contracted extremities. Pinched and sharpened features. Death generally occurs on the first or second day. Though sometimes the patient survives 5 or 6 days. Some are even said to recover, though in cases of recovery, we cannot be certain that perforation had occurred. Peritonitis is supposed to occur about once in 15 fatal cases.

Convalescence is very slow in this disease, in consequence of the severe anatomical lesions. During convalescence many diseases are liable to occur, which require very careful watching. There is great emaciation. Oedema and paralysis of the lower extremeties. Loss of the hair and the cuticle of the palms of the hands and the soles of the feet are very common.

The deafness occasionally remains for some time or if there is suppuration it may be permanent. Pleurisy and pneumonia often occur. Erysipelas, otitis &c. are also common.

I have now mentioned the greater part of the symptoms which occur in a case of common continued fever. But we seldom meet a case in which all the symptoms occur that I have mentioned. There are many cases in which the diagnostic signs are obscure, and therefore require close discrimination to detect them. We may also find it presenting many different forms, which are very likely to mislead the young practitioner. Instead of presenting the usual adynamic symptoms at first, it may appear in the form of simple inflammatory fever; in summer or autumn it

often presents the bilious or gastric form; in malarious regions it sometimes very closely resembles bilious fever; occasionally diarrhœa is the prominent symptom; the chest or the brain may appear as the part affected; or we may have it presenting in such a mild form, that it is very difficult to recognize: the patient may be walking about thinking there is very little the matter with him; even in these mild cases perforation, diarrhœa or hæmorhage may carry off the patient.

One attack usually exempts the patient from another; as it is very rare for the disease to occur twice in the same individual; relapses occur during convalescence, in consequence of imprudent exposure, overexertion, or from imprudence in diet; they are dangerous in consequence of the debility of the patient.

Duration: there is no regular period of termination: it may last from 15 to 80 days, the duration generally depends upon the severity of the disease. Death rarely occurs under the 9th day, most commonly about the end of the second or during the third week.

Anatomical lesions. Inflammation and sometimes ulceration of the glands of Peyer and Brunner are the most common and characteristic lesions of this disease. The elliptical patches are thickened and elevated, appearing long and ovoid; they are divided into the hard and soft varieties; the former are hard to the touch, and contain beneath the mucous membrane a layer of white or yellowish, firm, brittle matter, resembling crude tubercle: the latter are softer, less

Elevated and contain no matter; their elevation is owing to an inflammatory thickening of the mucous membrane and the submucous cellular tissue. The hard patches may undergo resolution or ulceration; the soft always ulcerate. The solitary follicles look like little rounded pustules; they are usually affected in the same manner as the glands of Peyer, though one may in some cases be affected without the other. Ulceration never takes place before the 9th day; perforation may take place at any time after the 12th day. The greater number of the diseased follicles are near the caput coli, as the disease advances those situated higher in the intestine become affected; there may be any number from one to thirty of them ulcerated. The mucous membrane of the ileum between the affected glands

is generally softened and injected. after the third week it becomes of a slatish gray colour. The mesenteric glands are generally enlarged and softened, those corresponding with the diseased glands in the intestine most affected. It takes from 2 to 3 months for the ulcerated glands to heal. Though ulceration very frequently occurs it is not invariable, as we sometimes have the fever running its whole course without it. These are the only characteristic lesions of the disease, though there are various others which occasionally occur: little dots of ulceration in the pharynx and œsophagus; congestion of the lungs; softening of the large intestines, Spleen, liver and kidneys, are often found though none of them are constant. The heart is often pale and flabby, the interior red; the muscles

lose their tenacity; the brain is seldom altered, sometimes a little serous effusion or congestion; the clot of blood is soft and easily broken; there is no buffy coat, the red globules are increased though changed in character.

Diagnosis. This cannot be made out, as in many other diseases, from one or two symptoms; we have no signs which are pathognomonic of the disease; we therefore have to combine a number of symptoms together, which combination gives us conclusive evidence of its presence. The symptoms which lead us to suspect its approach, are the slow mode of attack; the epistaxis; diarrhœa; headache; frequent pulse; expression of countenance; meteorism &c. After these the rosy spots; delirium; dichrotic pulse; the gurgling; sudamina &c. give us certain evidence of its existence. We distinguish it from typhus by the

slow mode of attack; the diarrhoea; the meteorism; the later appearance of the eruption and the disappearance of the spots under pressure; by the greater prostration in typhus; and after death by the inflammation of Peyer's and Brunner's glands in typhoid. Remittent fever sometimes resembles typhoid in the beginning, but the remissions, bilious vomiting and absence of the characteristic symptoms of typhoid, will in general enable us to distinguish the two diseases. Remittent or typhus fever may be complicated with typhoid, though we have seldom any difficulty in the diagnosis after the disease is fully established.

Causes. Many different theories have been advanced, none of which have been generally admitted; as yet therefore we have nothing certain in

regard to the cause. Some suppose that it resides in the atmosphere; others that it is communicated by contagion alone; others suppose that it is owing to animal and vegetable decompositions; others that the system has the power of self generation. Sydenham supposed it was an effort to change the diathesis of the blood. Dr. Bartlett says the efficient cause is unknown. Dr. Wood supposes an inherent predisposition exists in many persons, analagous in some measure, to the tuberculous, rheumatic and gouty diathesis, which is called into action by various exciting causes. Dr. Power supposes the cause always resides in the atmosphere, and is called into action by certain predisposing causes. Thus it appears that no theory has yet been advanced which has received general credence, and as so

many great minds differ on this question. I shall leave it for time to determine which, or whether any one is right. Age appears to have a remarkable influence over this disease; in children it mostly occurs from 9 to 14; it may occur at any time under this, even in the first year, but it is very rare in very young children. In adults from 20 to 30 appears to be the time at which most are affected; above 50 it seldom occurs. Cold; bad food; impure air; low damp apartments; grief; dissipation; fatigue and everything which tends to debilitate the System, appear to act as exciting causes. Recent residents are more liable to be affected than old inhabitants; persons coming from the country to the city are very liable to be affected, even old residents who leave the city during

the Summer months appear more liable to contract the disease than others who have resided in one place during the summer. We have had the effect upon recent residents most sadly exemplified in our class, during the last two Sessions; last year a large proportion of the class were affected with the disease, in propotion to the other part of the population of the city; out of the number three of our most promising associates were numbered with the dead. This winter I think the proportion of sick has been still greater, the mortality however has been less, as but one of our number has been stricken with the hand of death. His loss will long be deplored by those with whom he associated, as his kind and affable disposition could not fail to win him many warm and true friends. Neither Sex nor Season

appear to exert any important influence over the disease; it is often epidemic. It is generally supposed contagious, though it requires close contact, as the contagion acts very feebly; it may be communicated by fomites; the contagion acts slowly, generally from 3 to 4 weeks producing its effect, though it may be 50 or 60 days.

Prognosis. It is generally considered a grave disease, as even in the mildest cases, perforation or hemorrhage may carry off the patient. Age is important in the prognosis, patients under 20 years of age, of good constitutions seldom die. From 20 to 40 it is more fatal, over 40 or 45, the chances are still less. Chomel gives the average of deaths as one half over 35. Dr. Jackson gives one in four as the average of deaths in patient over 35 occuring in the Massachusets General Hospital.

The mortality exhibited by these statistics I think, is more grave, than it is, in private practice or in the Baltimore Infirmary.

Treatment. In regard to the treatment, we have as yet discovered no remedy which will neutralize the poison nor cut short the fever. There is hardly any disease in the nosology, for which more different and in some cases opposite modes of treatment have been advanced: thus we have Boillaud advocating free blood letting, as the only treatment to be depended upon, asserting success as the law, failure or death the exception. Again we have Lanoguis plan consisting of emetico cathartics throughout the whole course of the disease. But it is unnecessary to enumerate the different methods

that have been advanced, as all exclusive modes of treatment have been rejected by the unanimous voice of the profession. Drs. Smith, Jackson, Louis, Chomel and others have thrown important light upon the treatment of this disease.
We must submit the patient to hygienic remedies, and treat the different symptoms as they appear. If it presents the inflammatory type, we may take blood in small quantity once or twice if found necessary; venesection should seldom be resorted to after the first four or five days; local bleeding by cups or leeches will often answer better than general; in children and in debilitated patients blood must be taken very carefully. If the inflammatory symptoms are not present, we should

generally commence with a cathartic; even if there be diarrhœa, we sometimes find faculent accumulations. Calomel, castor oil, magnesia, rhubarb or any mild cathartic may be given, as drastic purging must be avoided. After this the bowels must be kept regular, an enema of flaxseed is the best agent for this purpose, as it is soothing to the bowels and allays irritation: Small doses of blue mass, hydrargum cum creta, rhubarb &c, must be given occasionally in connection with the enema to insure full evacuation of the bowels. If the diarrhœa is profuse, it may be checked with enema of starch and laudanum, if this is not sufficient morphia, black drop or opium must be given by the stomach; the morphia is also very useful if there is insomnolence

The diet must be of the simplest kind; the drink of the patient should usually be cold and such as he prefers; iced soda water or lemonade will generally be grateful. Refrigerant diaphoretics and diuretics must be given; chlorate of potash and carbonate of soda, or any of the non purgative neutral salts will answer; if there is much nausea it may be checked by prussic acid. Cold water is a very valuable agent in this disease; whilst the skin is hot and dry, it should be sponged freely; if the headache is severe, ice or cold water may be applied in bladders, or cold water poured on the head from a pitcher often has a very good effect. As soon as the pulse becomes reduced, or symptoms of prostration come on we must commence the use of stimulants; the quantity and

character of these must vary, according to the degree of prostration and the character of the patient: usually wine whey, broth, beef tea, port wine will answer. If the patient has been intemperate or the prostration is very great, stronger tonics and stimulants will be necessary: as brandy, carbonate of ammonia, quinine, bark, turpentine. For the meteorism, warm fomentations should be applied over the abdomen, the bowels kept open by rhubarb &c. an enema of Emulsion of asafoetida often produces decided benefit. turpentine is also very useful for the meteorism. If there is intestinal hæmorrhage it should be checked as soon as possible, as it is a dangerous symptom; turpentine acetate of lead, elixir vitriol, tincture rhatany or any of the vegetable or

mineral astringents may be used; mustard foot baths and flying blisters to the calves of the legs, as revulsives are also useful.
If symptoms of perforation appear remove all covering from the patient, allow no food or drink to be taken and give large doses of Opium, so as to keep him on the verge of narcotism for several days; this appears to be the only chance of escape, as it is the remedy recommended by all who have had any experience in the disease.
If the bronchitis is severe expectorants in small doses must be given.
If pneumonia supervenes we cannot deplete, as in the uncomplicated variety, therefore we must depend more upon revulsion and stimulation; flying blisters are very good externally, as we dare not use strong revulsives, internally Carb. of Ammonia, Serpentaria &c must be given.

The position of the patient must be changed frequently, to prevent congestion and the formation of eschars: the parts upon which he lies should be washed with a solution of nitrate of silver, or spirit and water, or they may be covered with a plaster; air cushions are very useful in preventing eschars: if they occur great attention is requisite, as they sometimes carry off patients, who otherwise might recover. Yeast poultices or other slightly stimulant and anti-septic applications must be made to the part. If we have headache, pain, diarhoea or any symptom occurring periodically quinine will generally relieve it. Dr. Wood mentions a condition of the tongue in the latter stages in which the fur is thrown off in flakes, leaving the surface smooth and glossy

as if deprived of its papilla; he recommends turpentine as the most effectual remedy in these cases. I have seen one case of this in my preceptor's practice, in which the turpentine was used with very good effect.

The above I think is the most common mode of treatment in this country. All the remedies that I have mentioned will seldom be necessary in one case, nor will they be used in the order that I have named them, but each case must be treated according as the symptoms present, and as the condition of the patient will justify. Many practioners and some of the highest celebrity recommend a slight mercurial impression as one of the best modes in the early stage of the disease; but as I have never saw the system affected by mercury in this disease, I cannot of

course give any opinion as to its beneficial or injurious effect. Many local remedies have also been recommended as having specific virtues, but as yet there is no one which has gained the confidence of the profession. During convalescence great care must be taken in regard to diet, exercise, exposure &c, in order to prevent a relapse. Cleanliness and thorough ventilation, are very important throughout the whole course of the disease.

I have now concluded a brief and very imperfect history of typhoid fever: and submit it with the utmost diffidence to the examination of those, who by their long experience and unlimited qualifi-cations will be enabled to detect many errors, which in consequence of my inexperience I have overlooked: therefore I ask that in their criticism they

will remember, that it is the production,
or rather I may say compilation of
one who, as yet has but little knowledge
of the Science, and that little principally
theoretical. But shall they in their judgment
(at the coming examination) think me qualified
to undertake the important responsibility,
which at all times rests upon the
physician, my aim shall ever be to
assist the cause of Science and to forward
the interests of the University of Maryland.
In conclusion I return my sincere
thanks to each member of the faculty
for the uniform kindness received
at their hands, hoping that they
may long fill the stations which they
now so honorably and usefully occupy.

Entire deficiency of memory in the strict sense of the term is exceedingly rare; when it does occur, it constitutes of necessity, a state of fatuity, more or less complete. This condition of the mind is met with only in certain cases of idiocy, or associated with the general imbecility of extreme old age.

Partial deprivations of memory, is however very common. In some cases it would appear to be congenital, depending, probably upon an imperfect development of certain portions of the brain. Thus, from the earliest periods of childhood, in many cases, a very great difficulty, and, sometimes an utter incapability, exist to acquire, and retain words & numbers; or to recollect persons, things, and events; and this

deficiency, often continues, throughout life, and cannot be overcome by the strictest applications, and most strenuous efforts,
Often however the defect of memory is produced, by circumstances, to which the individual is subjected, during childhood, or even at a later period of life. An injudicious system of education, by which, the activity of the different intellectual organs, is but imperfectly, developed will destroy the harmony which ought to exist between them, and thus affect the memory, Again the organs of the mind may be exausted, and become incapable of properly, performing their functions, from the very common error of overtasking the memory, with too great a variety of subjects at too early

a period of life, in other words
before the brain has acquired its
complete organization and firmness
In after life a frequent cause of
defective memory is mental inactiv-
-ity. The power of the memory in Com
-mon with all the faculties of the
intellect, is increased, by regular
exercise, often to a surprising extent;
while on the other hands, it is weakened,
we might almost say, entirely destroy
-ed, if called but seldom into action
A certain degree of attention is there-
-fore essential to the perfection and
accuracy of memory; hence they who
exhibit but little application of mind
have almost invariably a defective
memory, Too long continued or
intense applications of the mind
is capable of bringing about the
same result. The intellectual organs

in this case are overexcited, and in consequence of the morbid state into which they are thrown, cannot perform their functions with facility and regularity.

In all those diseases, in which the brain is affected, either primarily or secondarily, the memory, in common with all the intellectual powers is more or less impaired, and often for a period entirely suspended. When a partial disorganization of brain has taken place, the loss of memory is usually permanent. Frequently, however the loss or defect of memory, is the only symptom or morbid condition, under which the patient labours, and it is to these cases, that the term Amnesia is ordinarily applied. Thus an individual who had previously possessed

the most active memory, will sudden-
-ly, be deprived of its exercise, either
in relation to words, things, numbers,
or places, while in other respects his
intellectual functions, are not perceptibly
-tably impaired, in other cases the
deprivation comes on more gradu-
-ally, There is first experienced a
considerable difficulty in recalling
to the mind a particular idea, or
the word or Sound by which it is
~~experienced~~ expressed, This difficul-
-ty increases every day, until at
length it amounts to complete
incapability, it is to the brief con-
-sideration of this Class of cases
that the following lines are devoted,
In investigating the nature and
causes of this affection, we shall
be compelled to adopt the doctrines
of the Phrenologist, in relation to

memory; viz, that it is not a dis-
-tinct faculty of the mind, but one
of the general attributes of the differ
-ent elements of which the intellect
is composed; In other words that
memory, by the power of the will
excites the Knowing and reflecting
faculties of the mind to action,
in Consequence of which the idea
those faculties had previously formed
or acquired are recalled,
It is by this explanation alone that
we can account for the difference
in the powers of memory possessed
by different individuals; for the
fact, that in one Person the memory
shall be peculiarly active in
relation to words or numbers but
strikingly deficient in reference
to Persons or Places, & vice versa
or those cases in which the recollection

of events or dates is entirely lost, while in regard to all others ideas, it is as active as ever, It is true that some of the facts connected with the subject of amnesia are inexplicable by this or any other doctrine; it is only by a more numerous collection of accurate observations that we can hope to arrive at a correct Pathology of all the varieties of this curious affection

Varieties;— The most common form of amnesia is a total inability to recall a particular word or the name of a certain object, There are numerous instances recorded by different authors of this curious Phenomena, Persons so affected lose entirely the recollections of certain words or names, while they can recall with perfect ease all others; M. Cuvier relates the case

of a person, who had lost the memory of all substantive nouns, so that in common conversation whenever these should occur they were always omitted, there is an instance also related by Bouillaud in which the memory of substantives and adjectives were destroyed while there was a perfect integrity of the memory of things; Pinel records the case of a notary who after an attack of apoplexy forgot his own name and those of his wife and children & acquaintances Dr. Jackson of Philadelphia relates the case of an individual whose memory of words was temporarily destroyed by a sudden congestion of the brain, without any other disorder of the intellect in this case, ideas were formed combined

and compared; those of things, events and time recalled without difficulty, but. There was a total loss of the faculty of conveying ideas by words, though not by signs, the defect was not confined to spoken language, but also extended to written language

Prof. Dickeson of Charleston S.C relates an instance in which there occured complete amnesia in relations to names, while the memory of numbers and things remained perfect, In this case the patient was deprived of the power of reading words but not numbers, the attack was produced by a sudden Congestion of the brains, Dr Rush notices a case of amnesia which occured to a citizen of Philadelphia, who in consequence of a slight paralytic

disease forgot the names of his friends, but could designate them by their ages which he had previously learned; a very uncommon variety of amnesia is related by Dr Hahnstock, the defect was in reference only to proper names; the perception of the patient being at the same time clear, his memory otherwise good, his judgement sound and his business habits unimpaired In this case the defect was occasioned by a partial Congestion of the brain Dr Condie, of Philadelphia, also relates a curious case, occuring in a person suddenly attacked with slight paralysis, in which there was merely an inability to recollect the letters, composing the surname of an individual, he could pronounce his full name accurately but was

unable to write or spell his surname during the continuance of his disease, numerous other cases are recorded of persons, who preserved perfectly the memory of beings, events and facts, but who had completely forgotten the names and words by which they were accustomed previously to express themselves.

Defect of memory in regard to words presents many strange varieties, all of which it would be impossible to describe here, In some instances one word is erroniosly substituted for another, or, a certain name or idea, is expressed in a different language, without the patient being always aware of the substitution Many cases of this kind are recorded Sir Alexander Crichton relates one which occured to an attorney;

who, if he wanted, bread, would
ask for his boots, and though enraged
when they were brought to him, would
still call out for his boots or shoes,
If he wanted a tumbler to drink
out of, he would be very apt
to call for a cember pot; or if he
wanted this useful article, would
call for a tumbler or dish, Dr. Rush
also knew a gentleman, who when
he wanted a knife, called for a
bushel of wheat; many other instan
ces are noticed by authors in which
the memory of things persons
numbers or events, was destroyed,
while in all other respects the memory
was perfect.
Amnesia in relation to localities is of
common occurance, there is a case
of an individual, who, after an
attack of Malignant fever, lost

himself in those parts of London
with which he was before well
acquainted, and could not recognize
even his own dwelling.
The celebrated, John Hunter was
suddenly attacked with this
species of Amnesia in 1789. While
on a visit at the house of a friend,
He did not know in what part
of the town he was or even the name
of the street; when told him, nor
where his own dwelling was; he had
no conceptions of anything existing
beyond the room he was in, and
yet was perfectly conscious of
his deprivation of memory,
He was sensible of impressions
of all kinds upon the senses,
and looked out of the window
to see, if he could be made sensi
-ble of the situation of the house

the defect of memory went off grad-
-ually, and in less than half an
hour recollection was perfectly
restored,

Dr Condie, Knew two instances of
this kind in which the individuals,
at other times perfectly familiar
with the streets, suddenly lost
their recollection of locations, and
were obliged to inquire what part
of the town they were,

Persons are sometimes affected
with a total inability to recall
particular sounds, even those of
the most common occurance, There
is a case related in which the
patient could not pronounce
certain words, but could write
them, Dr Rush related a case
in which there was a loss of the
sounds of words but not of the

letters of which they are composed, the person being compelled to spell every word he employed to convey his ideas, Some individuals lose the power of reproducing certain musical tones, and are on that account compelled to give up singing,

In some cases there is a complete forgetfulness of events, time and place with a perfect recollection of persons & names, Dr Rush relates cases of this Kind,

The most curious form of Amnesia is that in which the memory of all foreighn and acquired languages is lost, A case occured in one of the london hospitals, the patient had an affection of the brain, and as he grew better spoke in a language which his attendants

did not understand, a welsh milk woman accidentally going into the ward, heard him, and conversed with him, it was then ascertained that the patient was a native of wales, but had left that country in his youth, forgotten his native dialect, and used english entirely for the last thirty years; and that he had now entirely forgotten the english and suddenly recovered the welsh; Dr. Rush mentions the case of an Italian Physicians who died in the city of new York in 1789. of yellow fever; in the commencement of his disease he spoke nothing but english, subsequently he could express himself only in french, and on the day of his death, spoke only his native language

There is sometimes an entire loss of written language, there is a case related of a Spanish tragic actor

who in consequence of an acute fever, not only forgot all the languages he had previously learned but even the alpha-bet, and was under the necessity of again learning to spell and read.
Dr Rush also cites the case of a clergyman, who subsequent to an attack of malignant fever forgot every thing he had learned including the alphabet; and had to com-mence his education anew. One day however, whilst repeating his grammar he called for a latin classic, which he had read prior to his attack, and at that moment all he had learned before revived in his memory.
An entire loss of memory as has been before remarked is extremely rare, and is always associated with idiocy; but the memory may be entirely and even permanently lost in relation to a certain series of events, without the patient-

exhibiting the least defect of intellect in any other respects; Thus, cases are on record in which everything that occured to the patient, during one or more days has been entirely forgotten, It is stated that persons who recovered from the celebrated plague of Athens, lost entirely the recollection of past events, and many for a time knew neither themselves nor their friends

It is also stated by Orfila, that upwards of one hundred and fifty French Soldiers who had eaten of the berries of belladona, became affected with alarming Symptoms of cerebral disease, and after their recovery none of them had any recollection of what had occured during their illness, After recovery from a state of intoxication, many persons have not the slightest recollection of what had taped around them, during the periods of a week ——————

There is a highly interesting case related of a woman, who, completely lost her memory for the period of 12 years, This condition of her mind was brought about by a severe and neglected diarrhoea, She resided in the City of Edinburgh for twelve years, the recollection of which portions of her life she had entirely lost. Her ideas were consistent with each other, but they refered to things as they stood previous to her coming to that City,

Many more examples of the various forms of Amnesia might be given; The preceeding however are enough to illustrate the general Principle that the memory of a certain class of ideas may be lost, either for a time or permanently, while the power of the intellect in all other respects, shall be entirely unaffected, We shall now proceed to notice the Symptoms and progress of

this partial deprivation of memory

In many cases the attack comes on suddenly in persons who are in perfect health, and as suddenly disappears,

Thus many individuals, whose minds are laboring under any unusual excitement, lose entirely the command of language, or are unable to recall a particular phrase or words; How often do we find persons, who under, ordinary circumstances, express themselves with cleadnes and fluency, but when called upon to addres a public Assembly are unable to recall a single idea or frame the simplest sentence

In all these cases the amnesia disappears with the emotions of the mind which produced it

In general the attack is preceded by headach, particularly in the fore part of the

head, this pain in the heads, is accompanied ordinarily with more or less defect of visions, dullness of intellect, and other symptoms of cerebral Congestion, In other instances, the defect is more gradually developed; the patients are then generally the first to perceive, and point it out to their physicians; though case are on record, in which the persons affected were totally unconcious of its existance,

When it is produced by an injury inflicted upon the brains, or is the consequence of some affection of that organs, it is often not until the patient has become convalescent that it is observed In chronic affections of the brains terminating, even in disorganizations of its substance, the amnesia may constitute, for a considerable time the most prominent symptoms of the disease,

The prognosis of all the varieties of Amnesia is of course variable, depending entirely upon the nature and extent of the lesion of the brain upon which they depend - when the brain is affected simply with partial irritation or congestion, the amnesia may cease, spontaneously within a few days or even hours; in other cases it may endure for weeks, and when disorganizations of the brain has taken place, for the remainder of life,

In some cases it has assumed a remittent form, There is a case related of a young man who was deprived of memory during the heat of summer but regained it, when cold weather set in, And it is stated of the great Milton, that his memory was far less active in warm than in cold weather

When dependent upon an acute affections of the brains, the Amnesia in general, disap-pears with the symptoms of the later; or as the mind and body of patient regain their ordinary vigor, In those case which supervene upon an attack of Apoplexy, the memory is frequently restored, as the bloods effused in the brains becomes absorbed, and the cicatrizations of the ruptured fibres of the brain is effected In many cases the amnesia disappears even though the paralytic affections of the limbs remain permanent. ——

Exciting causes. — These are all those circumstances which directly or indirectly produce irritation inflamation or — disorganizations of the brains — Hence it has been found to follow blows, or falls upon the heads, and wounds of the brains, cases of this kind are related by nearly all the surgical

writers, Baron Larry in particular, has recorded in his surgical memoirs numerous instances of wounds from swords or bayonets, penetrating the brain, through the orbits, in which the memory for words was lost; but not that of things. Amnesia has also been produced by excessive applic-ation of mind, violent paroxysms of anger, inordinate grief, and the other depressing passions. It has also been frequently brought on by a vicious course of life, particularly, except in venereal pleasures. One of the most frequent causes of Amnesia is the unnatural excitement of the genital organs in youth by masturbation. Many young persons, who, in the commence-ment of their studies, manifest the most happy dispositions, and give promise of eminence, soon become imbecile and their powers of mind & memory destroyed, by onanism and other species of

debauchery, A melancholy instance of this Kind, came under my own observation at the Bellv. Infirmary a short time since, The patient was the Son a respectable merchant of New York City, he studied Law and gave evidence of Considerable talent & Genius, his attainments in music and drawing were also considerable, his prospects in life were bright & promising, He was Known however to be addicted to the cursed practice of onanism, and this gave rise to fits of melancholly & despondency, he was remonstrated with by his friends, and made aware of the dangerous, and almost certain destructive tendency of his practice, These warnings were in vains, the habit continued, his gloomy moods grew & more frequent, and it was determined at last to give him the benefit of new scenes and change of

of air. With this view he was placed upon a vessel bound for California, After having been some time at Sea (his practice continuing) his mind became more and more affected, the Captain of the vessel, was in Consequence, com-pelled to stop at the port of Rio - and sent him in charge of our Consul there, by whom he was sent from thence to Malta, at the time of his arrival here, he was in a state of perfect insanity

His Father & Brother having been made aware of his whereabout came on to see him, and the spectacle which was exibited, at the meeting was truly heart rending;

There lay the Son whose cheeks, a few months previous, possessed the glow of youth, whose eye sparkled with the scintillations of filial affections, whose words had given, evidence of a bright mind, and whose sentiments, bestriged

qualities of heart which all admired, but now how altered, his features were contorted with the hideous smile of insanity, his eye stared the vacancy of idiocy - his muttered broken expressions, as they fell from his lips, betokened indeed a sad dethronement of reason, while the total unconciousness of the presence of his Father betokened a no less sad bereavement of memory, on the other hand, there stood beside the bed, the aged form of the Father, endeavouring to arouse his son to a sense of his presence, the tears coursed each other down his furrowed cheek, while the deep drawn sigh, gave evidence of a heart fair bursting with parental affection and anxiety

The suppression of the haemorrhoidal flux, of the menstrual discharge, or of any habitual discharge from the body by producing congestions of the brain,

~~by producing~~, frequently causes Amnesia which often disappears the moment these evacuations are restored, Exposure to intense Cold, or to excessive heat, over-fatigue, intemperance in ~~xx~~ eating and drinking, or the habitual use of intoxicating drinks, are likewise frequent exciting causes of Amnesia Certain Poisons such as opium, belladona hyosciamus, Stramonium, and Cicuta, very generally produce Amnesia, it has been observed that an immoderate use of Mercury, brought about the same result. Profuse hemorrhages, long continued diarrhoea, the want of food or the use of that of an unwholesome quality have also been known to produce a marked diminution of the powers of memory ——— ——— ———

Post Mortem appearances ——— ———

The Autopsic appearances in the brains

of those, who have died, whilst, labouring under Amnesia, have been extremely various

In many cases no morbids, appearances could be detected, sufficient, to account for the defect of memory; the irritations and Congestions which gave rise to it having in all probability ceased, with the life of the organs. In the greater number of instances however, effusions of blood are discovered in the brain or softening of its substance, or some abnormal productions, especially in the Cerebrum ——— ——— ———

Pathology — Amnesia has by some writers been styled a Paralysis of the organ of memory, and by others, Partial apoplexy, But neither of these propositions, conveys any definite ideas, as to the seat or nature of the lesions, by which it is produced.

That it is caused by a lesion the some

portion of the brains, is rendered evident, as well by the particular circumstances under which it occurs, as by the phenomena which ordinarily accompany it: and the appearances discovered in the bodies of those who have died whilst, labouring under this affection, The fact is that in a large number of cases, the defect of memory occurs subsequent to an attack of Apoplexy, It has been, attempted to be shown that all the varieties of Amnesia, depend upon disease of the Anterior lobes of the Cerebrum And it is in this portion of brain, that according to Spurzeim, all the organs, upon the activity of which memory depends, are seated, The history of numerous cases, and post mortem examinations, seem to lend truth to this theory, but on the other hand many cases are stated, by other writers; of an almost total loss of memory in which the Anterior lobes of the Cerebrum

were found unaffected after death, the disease of the brain being seated at a distance from the frontal regions, It will be perceived by what has been said, that pathology of this disease is somewhat uncertain, much in relation to it is involved in obscurity, and requires for its elucidations a far more extended series of observations than we now possess

The only conclusions that can be clearly deduced from the facts on record are; 1st that whenever the cerebrum, particularly its Anterior lobes, is the seat of irritation and Congestion, or of inflammation, that memory is altered, to a greater or less extent, frequently entirely suspended and is again restored to its normal Condition when the morbid state of the brain is removed,

2nd When particular portions, become disorganized or the seat of any

permanent lesion, the memory, is impaired or completely destroyed, and is then, incapable of being reestablished,

Treatment. The proper treatment, will depend entirely upon the state of the brain, pointed out by the particular phenomena accompaning each case; it will be unnessary therefore, to consider it in detail here, The abstraction, as far as posible of all the remote and exciting causes, that may be presumed to have given rise to the affection, is all important in every case, and, with a properly regulated diet, and regimen will often be sufficient to restore the power of the memory, even when for a time, they have been completly lost.

In a majority of cases in which the affection occurs, suddenly, in persons otherwise in perfect health, it will be found by an attentive examination of the concomitant symptoms, that a partial congestion

An

Inaugural Dissertation

On

Auscultation of the Lungs

Submitted to the examination

of the

Provost, Regents & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Robt E. Bromwell

of

Maryland

One of the most valuable discoveries in the science of Medicine is the diagnosis of disease by physical signs — And to the assiduous and successful researches of Laenec, we are indebted for a vast amount of the knowledge of the subject, which we now enjoy — Though Auscultation was hinted at so much as two thousand years ago by Hypocrates, and notwithstanding the subject is so simple and yet so valuable it was scarcely noticed again until 1816 when Laenec took it up and largely increased to mankind the blessings of life and health, and for himself achieved a name which will ever live in the honourable profession, of which he was a worthy member — But the most startling and surprising part of its history is, that even now, in this enlightened age medical men of reputed intelligence, have passed it by unnoticed, or thrown it aside as something totally unfounded or altogether

useless — It would be entirely unnecessary to attempt, in this imperfect treatise, to advance any arguments in support of the science, since a short study of it is a most convincing proof of its utility

To appreciate the valuable information attainable by auscultation in disease, it is of course, essentially necessary, that the ear should be well trained and perfectly familiar with the sounds of the organ or part in health -

For the purpose of conducting, and more clearly transmitting sounds under certain circumstances, the stethoscope is employed, instead of the naked ear - It is applicable to those cases, more particularly, where the ear cannot be accurately adapted to the part - where from some cause we are unwilling to apply it - or where we wish to ascertain the sound in a small or circumscribed spot.

In using this instrument, or auscultating with the naked ear, it is necessary that either should

be very accurately, and at the same time light ly adapted to the part, so that we may catch with accuracy the slightest sounds –

–Auscultation of the Lungs –

In examining the lungs we should in every case examine both sides comparatively, for by comparison alone, we ascertain in many instances, morbid changes which otherwise would be overlooked – In healthy respiration, the act of inspiration is more forcible and about three times longer than expiration – a fact which was first noticed by Dr James Jackson of Boston, in the examination of a case of phthisis, of which disease, an increase in the length of expiration is one of the first symptoms –

At the bifurcation of the trachea we have the respiratory murmur ruder than at any other portion of the chest, but equal on both sides, except, occasionally at the summit of the right lung it is a little rougher –

Respiratory murmur, is produced by the air

entering through the bronchial tubes the small vesicles of the lungs – It may vary in different individuals in health, and in the same individual in disease – When we find it having the intensity of an infants, it is called Puerile Respiration, and may be accounted for, by the part under our ear having increased duty to perform from disease in some other portion.

If the sound be of diminished intensity it is Feeble Respiration, and depends upon a small quantity of water, pleuritic effusions, or tumours removing the lung from the walls of the chest – by obstruction of some of the bronchial tubes. or by condensation of the substance of the lung either by tubercles, emphysema, or fluid in the cavity of the pleura – If the feeble respiration be accompanied by dullness on percussion at the summit of one, or both lungs it most probably is occasioned by tubercles, if at the base of one or both lungs, by pleuritic effusions, or fluid in the cavity of the pleura.

Complete absence of respiratory murmur might be occasioned by an increase of any of the same causes, but is generally the result, if on one side only, of effusion from pleurisy, if on both sides, Hydro-thorax

The next sign to be noticed is the change in relative length of inspiration and expiration which in the healthy lung is about three to one - Any change from this proportion seems to be owing to an increase in length of expiration, and indicates either, a deposition of tubercles, hepatization at the root of the lung, or pulmonary emphysema - they are to be distinguished from each other by the location of the sign and the general symptoms of the patient

The immediate cause of prolonged expiration has not been very satisfactorily explained - by some it is supposed to be produced by a deposition of tubercles in the lung which produces prominences on the interior of the final bronchial ramifications, offering resistence to the egress

of air – hence an increase in force and duration of expiratory sound – but it is evident that this explanation is incomplete, since it will not account for prolonged expiration in emphysema — Dr Jackson explains it by a decrease in vesicular sounds, thus, in health the respiratory sound is composed of that produced by the air passing through the bronchi, and that produced by the air entering the pulmonary vesicles, and as the latter predominate, it alone is heard – but if the number or expansion of these vesicles be diminished by tubercular infiltration, and consequently a decrease of their sound, the sound of the air traversing the bronchi remaining normal, will predominate, and therefore will alone be heard – To this has been added, the increased density of the lung by infiltration, increases its power of conducting sound and at the same time decreases its contractility, and by its slow contraction the

respiratory murmur is prolonged — All of these explanations seem liable to the same objections - viz. they are incomplete — for if we have prolonged expiration in emphysema, it is very certain that it is produced by some cause which is not given to us in any of the above explanations, since emphysema is not necessarily coexistent with tubercles — If Dr Jackson's theory will allow that the decrease in number and increase in size of the vesicles in emphysema, will give rise to the same phenomenon, in regard to expiration, as a deposition of tubercles — then his theory would seem to me decidedly the most plausible — and yet, it would not answer in cases where expiration is prolonged to three times the length of inspiration, but this is rather deep water - so we will pass on to

Harsh Respiration — It is produced by thickning of vesicular walls, and may

occur in any case of pulmonary induration

As a general rule where we have harsh respiration with great clearness on percussion and prominence of the chest, we have emphysema — but if it be accompanied with dullness at the summit of the lungs, with increased expiration and resonance of the voice, we refer it to the presence of crude tubercles

Tubal or Bronchial Respiration —

May be imitated by blowing rapidly through a stethoscope or any similar tube.

It is occasioned by hepatization or solidification of the vesicular structure of the lung from any cause, as crude tubercles, pulmonary apoplexy, effusion of water into the cavity of the pleura, tumours compressing the lung, or by uniform dilatation of the bronchial tubes with induration of the parenchyma — The diseases in which we most frequently meet with are, pneumonia in the second stage, phthisis pulmonalis, and

pleurisy – If it be found at the summit of the chest, not well marked, and during some chronic affection, it indicates tubercles.

If it be accompanied by some acute affection, well marked, and proportioned in extent to the dullness, we would pronounce last it pneumonia – but if not proportioned to the dullness, it is produced most likely by pleurisy –

Cavernous Respiration – is produced by a cavity, and in nine cases out of ten, this cavity is the result of softened tubercles, it may also be produced by a cavity from abscess or gangrene, or the dilatation of a bronchus – The sound may be imitated by blowing into a hollow vessel, or forcibly into the hands fixed together so as to form a cavity – When the cavity is small it is hard to distinguish it from bronchial sound – Its ordinary seat is at the summit of the chest –

Amphoric or Metallic Resonance – It is occasioned by the air entering a large cavity in the lung through a small opening, or passing through a small aperture into the cavity of the pleura – It may be imitated by blowing into the bung hole of an empty cask, or into a thin decanter partly filled with water – It is more evident in inspiration, and generally accompanied with metallic tinkling – When well marked, it almost invariably indicates pneumo-thorax with pulmonary fistulæ – when not so well defined, it may be the symptom of a large cavity, generally tuberculous, though it may be from gangrene or abscess – Its general seat, is the lateral, and posterior middle, region of the chest

Abnormal Sounds

These are Ronchi, Rattles and Friction sound of the pleura – Ronchi or Rattles are produced by altered secretion – called Ronchus when the sound is musical, and rattle

when it is bubbling – we have the dry Ronchi and humid rattle – the ronchi are divided into sonorous and sibilant –

Sonorous Ronchus – It may vary in intensity from the sound given by the vibrations of the string of the bass viol, to the musical sound of the musquito – It is produced by alteration of the calibre of the bronchial tubes, by more or less viscid mucous which vibrates by the passage of the air through them – it is generally heard in the upper and middle lobes of the lungs posteriorly – may be limited to a particular spot – generally means bronchitis in some of the larger tubes, and may be permanent or not –

Sibilant Ronchus – generally or perhaps always indicates a similar affection of the smaller bronchial tubes – It is the sign of capillary bronchitis – heard only in expiration and generally upon the anterior part of the chest —

Humid or Moist Rattles

Crepitant Rattle – It is met with only in an engorged or congested state of the lung It is so seldom found in any other disease, it may be considered pathognomonic of pneumonia in the first stage – it is heard only in inspiration, and gives us a dry crackling sound, similar to that produced by throwing salt on a hot shovel or compression of a piece of sponge cake, or rubbing together a lock of hair near to the ear – It seem like the bursting of numerous and small bubbles in rapid succession – It is heard most distinctly at the posterior and inferior part of the lung generally on but one side – it may be perceived only after coughing, and is sometimes mingled with other sounds – In resolution of pneumonia the bubbles are coarser and louder.

The cause of crepitant rattle is the separation of the walls of agglutinated vesicles which have been brought in contact by con-

-gestion and which adhere by a viscid secretion which they contain

Sub crepitant Rattle, is produced by the passage of air through some secretion - It sounds like the bursting of numerous and unequal soap bubbles but varying both in number and character, it is found both in inspiration and expiration, and generally seated at the inferior and posterior portion of the chest on both sides, though it may be more distinct in some cases at the superior part of the lung - When the bubbles are numerous at the base of the lung and decrease as we ascend, we may be almost certain that bronchitis exists - but if they are almost or entirely absent at the base of the lung, and increase in number as we reach the summit, we are led to suspect softened tubercles, especially if it be confined to one side

Moist Crepitant Rattle - is produced by the air mingling with a liquid which is not vis-

cid in the vesicles or smaller tubes - it sounds like the bursting of bubbles on soda water or champagne, and is heard in oedema of the lungs, pulmonary apoplexy or hemorhage of the lungs - it is found in no particular portion of the organ

Cavernous Rattle, is always accompanied by cavernous respiration, and is produced by the bursting of a few large irregular bubbles - it is heard in both inspiration and expiration, generally at the summit of the lung, from the fact that the cavity which gives rise to it, is the result of softened tubercles -

Friction sound, is produced by pleuritic effusion, tubercles of the pleura, and rarely by emphysema giving rise to an irregularity on the surface of the pleura, for in perfect health the polished surfaces of the pleura give out no sound as they glide upon each other - As a general rule it means an improving pleurisy - though if it be confined to the sum-

mit of the chest, it may indicate tubercles –

There are a few other abnormal sounds which are not well characterized, and for the most part produced by tubercles –

Auscultation of the Voice

When a person in a state of health, speaks, the sound is transmitted through every part of the respiratory apparatus, and differing, as we apply the stethoscope, or ear, to different parts – The resonance is greatest at the Larynx and superior part of the trachea, and decreasing as we descend along the course of the bronchial ramifications when we come to the pulmonary tissue, it is scarcely heard, and we discover nothing more than a slight trembling, such as is observed by palpation – It, like respiration is equal on both sides of the chest at corresponding points, except perhaps at the summit of the right lung, where from the greater size and more numerous branches of the right bronchus, we have slight increase of resonance

In emphysema, the resonance is decreased, so that we have merely a purring sound - In Pneumo-Hydro-thorax and in pleurisy with great effusion the resonance is entirely lost - these are the only cases in which it is decreased - but it may be frequently increased -

Broncophony, is produced by the solidification of the lung, generally from effusion of lymph in pneumonia or infiltration of tubercles in phthisis, It is a very much increased resonance, and sounds like the voice came partly into the tube of the stethoscope - When this signs is of less intensity, it is called, Increased resonance, and corresponds to rude respiration, which together with prolonged expiration, are the earliest symptoms of phthisis - Broncophony is generally heard most distinctly over the inter scapular region -

Pectoriloquy, was the first auscultatory phenomenon observed by Laenec - it is produced by the vibrations of the voice in a cavity

communicating with one of the bronchi, and in nine cases out of ten, is the result of softened tubercles - In pectoriloquy, the voice seems to pass directly through the stethoscope to the ear and we hear articulate words

Egophony, is pathognomonic of pleurisy - It is produced by a thin layer of water compressing the lung - In acute pleurisy it may be heard twice, (provided the patient recovers,) 1st when the water has accumulated to a certain amount, and again when it has been absorbed to the same quantity - if the fluid be more or less than a certain amount, the sign is lost - It is a bleating or a goat like voice and seems to be some distance from the ear - usually heard about the lower angle of the scapula, though it may change its seat by a change in the position of the patient - It is a symptom peculiar to pleurisy, yet pleurisy may exist without it -

Doctor Power has observed egophony, in one case of pericarditis with effusion -

Auscultation of the cough

The cough may be either bronchial, tubal, cavernous, or amphoric — all of these peculiarities are very similar to the corresponding peculiarities of resonance of the voice and respiration and are heard in the same diseases

Metallic Tinkling — By metallic tinkling is meant a sound which occurs in that condition of things which gives us amphoric resonance - viz. a cavity partly filled with fluid into which the air passes in respiration —

It sounds like striking a piece of metal or glass with a pin, or by dropping grains of sand into a glass - It indicates a serous or purulent discharge in the pleura with pneumo-thorax, or a large tubercular cavity partly filled with liquid pus, but as a tuberculous cavity is seldom large enough to give this phenomenon, it is almost pathognomonic of hydro-pneumo-thorax with a fistulous communication between the pleura & bronchus —

of the brains has taken place, in such cases, bleeding, either local or general, or both, according to circumstances, will be demanded together with purgatives, cold applications to the head, counter irritants to the extremities, perfect quietude of mind, and body, and a very restricted diet.

When Amnesia is perceived in the convalescency from Apoplexy or acute affections of the brains, great advantage will be derived from blisters or an issue at the nape of the neck, cold sponging of the scalp, and frictions of the surface generally, care should be taken also not too soon to excite or fatigue the mind by intellectual labours of any kind, or by the ordinary cares of business. When the patients

strength is sufficiently recovered
a short journey will often be
decidedly beneficial,
Where disorganization, has taken
place in the brain, the amnesia
in a majority of cases, continues
during the entire life of the Patient,
in spite of remedies — — —

Concluded

An Inaugural Report of
Five Cases -
Submitted to the Examination of
Trustees, Regents and Faculty of Physic
of the University of Maryland,
for the Degree of Doctor of Medicine
by
M. W. Merryman
of
Maryland —.

II Pneumonia

III Phthisis

IIII Typhoid Fever

IIV Scarlatina

IV Compression of Brain.

The first case to be detailed is that of a Sailor Boy - Aged sixteen years - of delicate frame but good constitution - who entered the Marine ward of the Baltimore Infirmary on the sixteenth of April — 49 —. On the ninth he had been exposed to boisterous weather down the Chesapeake - but sustained no inconvenience until the evening of the eleventh, when after a most extravagant debauch upon fried eggs, he was attacked with vomiting purging, tormina ventris & other symptoms of gastro-enteritis. In the course of a few hours, these subsided & were succeeded by high febrile reaction headache - thirst, loathing of food - severe, heavy pain along right side, hard cough & occasional delirium - all of which continued, increasing in severity, up to the day of his admission into the hospital. He had been subjected to no professional remediation, but a blister had been applied to the seat of pain & a few doses of medicine administered by the Captain of the vessel upon which he was employed. Upon examining into the condition of the pa-

tient — his complexion was found to present the
dusky, livid tinge characterizing a want of de-
carbonized blood in the capillary vessels - decubitus
upon back, inclined to right side - upon which side
still existed the dull heavy pain alluded to above -;
- the tongue was coated with a stratum of yellow-
ish white fur - there was some nausea - thirst, an-
orexia, constipation of bowels - distressing pain in the
Scanty high colored urine
head & wandering of mind - when undisturbed -.
In addition to these Symptoms the patient complained of
great soreness of throat - exalted respiration - it being
doubled in frequency compared with healthy stan-
dard - a harsh painful cough, attended with
scanty, tenacious rusty-colored Expectoration -;
the voice exhibited the low suppressed tone so con-
stantly observed in pulmonary inflamations - pulse
was full - tolerably resisting & frequent - numbering
one hundred & twenty strokes per minute -.
The posterior & inferior half of right side of the
chest - yielded upon percussion a dull flat sound.
& the anterior surface of the same side the pec-

doubtless from accumulation of mucus in the bronchial tubes

uliar sound of "cracked metal" also increased vibratory thrill, discovered by palpation.

Upon application of the ear, a large amount of mucid respiration & coarse moist crepitus was heard over a considerable portion of both lungs giving evidence of extensive inflamation of bronchial mucous membrane. The vesicular murmur was entirely absent in that part of the thorax which gave out dullness upon percussion & in its place very audible bronchial respiration, increased vocal resonance & bronchophony. As the ear receded from the carnified portion of the organ towards its summit the fine crepitant crackle pathognomonic of pneumonia might be distinctly heard occupying a considerable surface yet in the more incipient stage of the disease. In addition to this diffused over all parts of the viscus yet capable of performing its function was the puerile respiration proceeding from the double duty imposed by the morbid upon the comparatively healthy structure. Auscultation of the heart revealed a very novel & peculiar species of disordered action. a

sort of whiffing noise. synchronous with the sys-
tolic contraction. which appeared to be referable to
some functional derangement of the mitral valves
sympathetic with gastric derangement.
There is nothing in the group of symptoms here presented
to bedim in any degree the clearness of the diagno-
sis. Whatever doubt might have existed are effect-
ually removed by auscultation, which lays open to our
view the "secret recesses of the breast" & enables us to read
the dark doings of disease with precision & certainty.
Whilst observation & experience, the hand-maid of
Medical Science. placed in our power the weapons
with which to check its march. The great indica-
tions are to combat the fever, dyspnea & the advanc-
ing inflamation & these are fulfilled by means
of bloodletting. tartar emetic & Mercurials. The
first things premised therefore were venesection
& mercurial purge. succeeded by ℞ Hydrarg.
submur. grs xij Emet. Tart. gr j. Ac. Gum. ʒj M
in pulv. viij. one to be taken every three hours &
quarter of a grain of Tartar emetic the hour inter-

evening. Stimulated tea ad libitum & diet of farinaceous food in small quantities.

On the morning after his admission the patients symptoms manifested little alteration - there were considerable restlessness & anxiety. The local inflamation was progressing - but skin was more moist & relaxed, & heart action somewhat subdued & the peculiar morbid 'whiff' diminished in degree -

On the 18th the intellect still wandering, when roused however responded clearly & intelligently - the pneumonia remained yet unsubdued - pulse 130. respiration 40 - cough very harsh - Sputa scanty & more catarrhal but still tinged with redness - Cups between the scapulae. The amount of Calomel in the powders was reduced on account of the its action upon the throat becoming manifest. - From this time until the twentieth there was very little appreciable change in the Boy's condition - at this time his whole aspect began somewhat to brighten - the complexion to lose its dusky hue - respiration to become softer, slower & more natural - the expectoration

more abundant glairy & catarrhal; the headache had
vanished. the pulse fallen to one hundred & eight-
& the dyspnea gone. On examining the chest the
was found still lingering some moist crepitus
& puerile respiration. but the presence of the crep=
itatio redux evinced the return of air into the
obstructed air cells. The other physical signs re=
mained pretty much in statu quo it but it was
very evident that the inflamation was termin=
ating in resolution. After this day convalescence
became fully established. On the 22d a profuse
critical perspiration broke forth from every pore.
urine became larger in quantity & turbid. The pulse
ninety six softer & natural. The sputa scant
glairy & untinged with rust. intellect brighter
& nervous system calm & composed. The dull
sound of percussion had lessened. The bronch=
ophony bronchial respiration & fine crepitus were
gradually fading into the condition of health.
The patient complained soreness of throat, tender
ness of gums. on account of which the mercurial

powders were discontinued & a lavement of Turpentine prescribed for the month - An Infusion of Eupatorium & Senega with Tar. Emetic was substituted for the former treatment -.

The patient lingered about the wards of the hospital for some time & notwithstanding his imprudence & careless exposure suffered no relapse - For some days the inflamed portion of the lung evinced remaining vestiges of the disease - such as slight dulness upon percussion - fullness & respiratory murmur - bronchial respiration & a small amount of fine dry crepitus - but by the aid of a few tonic remedies these sequelae soon faded away & the patient left the house almost perfectly restored to health -.

There is nothing in the preceding case to distinguish it above ordinary Pneumonia, uncomplicated inflammations of the lungs - or to afford opportunity for remark upon points which are not daily discussed & well understood -. It may be regarded as a type case with respect to severity - progress & duration.

In the onset of the desease the symptoms of gastro-enteric irritation appeared to supercede the usual mode of attack by chill - but this occurrence did not appear to modify the after progress of the desease & was in all probability a mere incidental affair resulting from the presence of ingesta in a system already to some extent under the influence of inflamatory action & that the chill would have come on, but for the more violent accident which replaced it - ÷ . As the desease had been advancing triumphantly for the space of four or five days without any barrier to oppose its progress - of course the system did not respond so happily & readily to the antiphlogistic treatment as if the case had been seen at an earlier date -, the prognosis therefore was somewhat grave upon the sixth or seventh day - but the judicious Medication so promptly & energetically adopted by Dr. Chew soon removed all apprehension as to the final result of the case -

It may be parenthetically remarked -

that - although a regular diary of the patients condition was scrupulously kept - yet, as the symptoms on each succeeding day for several days consecutively were so nearly identical - that it was held a work of supererogation to present them in a regular report as they were noted down at the bed side -

The symptoms detailed to day (as an instance) - would not be alluded to again - until some alteration occurred requiring special observation -

The following case is that of an Irish Boy aged seventeen years— possessing a frame rather indicative of a delicate constitution— a contracted chest, dark hair, dark eyes— complexion of a dusky florid hue & that peculiar pearly cast of conjunctiva so frequently met with in persons of the phthisical diathesis. He was born of healthy parents in the county of Galway Ireland where he had been actively employed in some agricultural pursuits. His health had been habitually good, until a week at sea on his voyage to the United States— about which time he was attacked with a troublesome catarrh & cough, which could be referred to no appreciable external cause as his accommodations were comfortable & he had suffered no exposure to inclement weather. He landed in Baltimore about eight weeks since & enlisted himself in the service of a tallow-chandler residing near Canton— his cough still persisting & symptoms of dyspnea beginning to manifest themselves. Being active & industrious he applied himself to his business with energy

but being much exposed to the vicissitudes of heat & cold, his indisposition increased to such an alarming extent as to compel him to desist from his employment & solicit medical advice - in quest of which he applied for admission into the Baltimore Infirmary on the tenth of April - having been unwell for two months & now complaining of - Exhausting night sweats which had existed for some time - distressing cough & dyspnea - inability to lie upon left side - considerable fever rather irritative than Sthenic - a pulse small somewhat compressible & numbering one hundred & twenty - Skin relaxed & moist - tongue coated with a slight stratum of fur - apetite expelled & a feeling of general ill health without any great degree of local misery - The symptoms of thoracic desease developed by physical examination of the chest, were - excessive coarse mucous crepitant râle, combined with every variety of sibilant & sonorous rhonchi evincing extensive & very aggravated Bronchitis occupying both lungs - With exception of a

small amount of fine, pneumonic crepitation just beneath the left nipple, These were the only morbid sounds that the ear could detect- for whatever others might have existed - were so entirely masked as to elude the minutest examination -

The comparative resonance of the two lungs upon percussion presented small difference saving the posterior & inferior portion of the left lung, which yielded dull sound for space of one third - Whether owing to pneumonia or pleuritic effusion? probably, the latter judging from the dependent position & the absence of vocal vibration -. It should have been remarked previously, that the expectoration was most profuse in quantity, characterized by the viscid glairiness of bronchitis, intermingled with an occasional dash of the rusty sputa of pneumonia. —

From consideration of the group of symptoms above detailed - the thorough diagnosis of the case was not easy rendered very exact or certain -. They all afford undoubted evidence of intense inflamation of the bronchial mucous membranes & in some degree of the parenchematous lob-

ules of the lungs themselves - but whether these lesions do ~~not~~ exist as a mere result of more deeply-seated & serious complication is somewhat problematical -

The very steady - persistent onward progress of the symptoms from its inception to its present crisis - the night-sweats debility & emaciation & some few other collateral circumstances ~~would appear~~ to furnish some probability of tubercular deposit - but all these results frequently occur from protracted inflamation of the bronchial tubes - But - whatever may be the true condition of the case - whatever may be the cause of the existing inflamation - the most obvious indications for treatment are to combat the symptoms which constitute the more immediate danger of the case & as the adynamic condition of the patients system was not such as absolutely to prohibit the usual antiphlogistic method — a few cups between scapulae (observing their effects) & Tart. emetic every second hour were prescribed by Dr. Chew — which I upon the second visit had succeeded reducing the action of the heart, - ameliorating somewhat the cough & dyspnea, clear-

ing the Sputa of its rusty-colored tint & producing a most profuse cutaneous transpiration - After a few days, nothing having occurred to contraindicate the course adopted - a second application of cups was made & the tartar emetic increased until some of its specific influences were observed -. On the fifteenth - being the fifth day since his admission - cups were again applied & an Infusion of Eupatorium with Hyoscyamus added to the preceding agents. On the following day the condition of the patient was somewhat improved - he had slept well - the thoracic symptoms had in a degree subsided - but there appeared to be little or no effort at recuperation - ℞ Hg Pil grs iij Potas. Nit. ʒij Ant et Potas. gr j. Misce et divide in oct. ~~pil.~~ pulv. unus quâque secunda horâ sumendus - Comp. chalk mixture if diarrhea should occur -

The signs of improvement which for a short time revived hopes, soon gave place to those of prostration which now became so urgent as to demand attention & recourse to sustaining agents was the only hope now left of enabling the failing powers of life to bear

— Immense adhesions of pleural surfaces at various points & between these large accumulations of serum. Every portion of substance of the lungs was infiltrated with tubercles in every stage from incipient formation to that of softening & suppuration. A large cavity in middle lobe of right lung with smooth, membranous parietes & another at the base of left whose walls were rough & jagged. The former giving evidence of long standing — the latter of recent formation. One of these cavities was filled with the peculiar, dark colored fluid expectorated during life. The mucous membrane lining the air passages was also much inflamed — with an occasional patches of tubercular ulceration upon its surface — & spots of lobular pneumonia scattered throughout the pulmonary tissue —

A Negro Girl - aged fifteen years - of rather delicate constitution - flaccid muscle - stolid brain - but in the habitual enjoyment of tolerable health fell under my observation in November - 49.

Her malady commenced insidiously - with general uneasiness, lassitude - soreness of throat & limbs - alternate flushes of heat & cold - headache, epistaxis - stupid dull expression of countenance - thirst, impairment of appetite, nausea - abdominal disturbance & diarrhea —.

These symptoms were gradual & continuous in their progress - so that the patient's indisposition was not so great as to necessitate confinement or demand special attention until about the fifth day from the inception of the disease.

Upon examination the following characteristics of subsultus tendinum fever were observed - Headache, stupor, injected conjunctiva - hot skin, full soft compressible pulse one hundred & twenty in number - tongue covered with a white moist pasty fur, pointed at its apex & reddened round its edges - anorexia, slight

Epigastric tenderness, meteorism of abdomen, gurgle & some pain upon pressure in the right iliac fossa. & diarrhea - three or four liquid alvine discharges during twenty four hours - There was in addition slight cough & expectoration with some of the physical signs of bronchial inflamation

The aggregation of the foregoing symptoms afford strong probability, without any one of them being determinate, of the case being one of enteric fever.

The gurgle though stated by some to be pathognomonic of this disease is not so in reality & appears only to be valuable as a concomitant with other circumstances - The rose-spot eruption which is diagnostic, was of little avail in the present instance, for if it did exist like the rose of the Elegy, it was "born to blush unseen" upon the dusky hide of Ophie, a sable daughter.

There was an indication for active medication & the method of treatment adopted therefore was soothing & expectant - A small laxative dose of Magnesia was premised to correct the nau-

sea & clear the alimentary canal of any irritating feculæ - followed by Citrate of Potassa in form of Neutral mixture - with cold acidulated drinks. As the tongue seemed to evince considerable de= rangement of secretions - a small quantity of Blue Mass was prescribed in minutely divided doses - Hygienic measures were also strongly enjoin= ed - attention to cleanliness - good ventilation, cool ~~air~~ temperature - & a diet consisting of rice - Mu= tton.

On the sixth, seventh, eighth & ninth days of the desease. There occurred very little change deserving of special remark - the symptoms for most part ~~continued~~ pursued their uninterrupted course becom= ing gradually more grave & serious - but not pro= nosticating any great degree of danger. There was nothing to require additional treatment except a little chalk mixture to check the diarrhea & ~~&~~ a cessation of the pil. Hg. - which was discontin= ued after a few doses had been taken -.

About the tenth some evidences of adynamia be=

began to be present. The pulse became smaller & more feeble - the skin relaxed & moistened with an unpleasant perspiration - tongue filled with a dark damning coating & protruded with difficulty - abdomen distended with gases - eyes more injected - mind more dull & heavy - subsultus tendinum & tremor of the muscles of the tongue & jaws more decided -

The case remained in this condition with the addition of greater prostration - sordes upon gums & teeth tinnitus aurium &c - for several succeeding days. A little beef tea was allowed to support the sinking powers - small doses of a terebinthinate emulsion - & minute quantities of Blue Mass were again had recourse to & with some apparent benefit - As there occurred no complications to demand specific treatment nor indicate any change in that at first adopted - the same course was persisted in until about the Eighteenth - from that to the twentieth when some amelioration began to take place - the

Countenance assumed an expression of more solicitude as to surrounding Objects. The tongue began to throw off its coating from the borders. The Skin became more pleasant & natural. pulse fuller slower & more regular. abdominal distension subside. & some desire for food returned. & all the secretions commenced to reassume their natural character. Convalescence having now set in & nothing occurring to restrain its progress. the restoration to health was rapid & permanent.; the functions in an unwonted short time all returned to their offices with as much promptitude & regularity as if nothing had intervened to disturb their Equilibrium.

An Irish Girl - fifteen years of age - with light hair - blue eyes - & a predomination of the sanguineous temperament entered the Baltimore Infirmary in December - without any noticeable preliminary warnings - on the day preceding her admission - She was taken with a very decided chill - succeeded by excessive fever - headache, hot skin - flushed face - great thirst - nausea & vomiting - violent pains in back & limbs - considerable muscular debility & after a short time soreness & swelling of the throat -

Sunday - the day of her entrance - The agonizing pain in the loins & limbs have been replaced by sensation of soreness & contusion - The remaining symptoms mentioned above are continuing with a more & more intense degree of violence - & superadded to them are the peculiar unmistakeable rash of Scarlatina - diffused upon face, neck & arms - a burning, itching, tingling pain of the cutaneous surface - increased soreness of throat & redness of fauces - a suppressed watery appearance of conjunc-

tiva - but not to the same extent as is common in variola - . The tongue is covered with a yellowish white coating of fur - projecting through which may be seen the inflamed & elevated papillae presenting an appearance very analagous to that of a fully ripe strawberry overspread with a layer of cream - The pulse is full & very frequent numbering one hundred & thirty strokes in the minute - intellect responds clearly when aroused but has a decided disposition to stupor & wandering when undisturbed - bowels are constipated - urine scant & high colored. - Diagnosis - Scarlet fever - The manner of incep= tion - The affection of throat - The appearance of the tongue - The extraordinary rapidity of pulse - & more than these all the peculiarity of the rash - its bright diffused Scarlet hue & its appearance upon the second day - all combine to place the diagnosis beyond the shadow of doubt - - . As the desease is the product of a specific virus fermenting in the blood - and as there is no remedial agent with which to annul its power - we must address our treatment as

possible to the mere palliation of the symptoms & rely upon the "vis medicatrix" to expel the poison from the system. Consequently the objects had in view are restoration of the suppressed intestinal excretions - mitigation of the febrile action by refrigerant saline, acidulated potions - a sufficiency of cool, fresh pure atmosphere - anodyne fomentations to the throat - mild bland farinaceous diet —.

Monday. The general condition of the patient corresponds very much to the account given yesterday; the headache is less severe. The rash is growing deeper & more scarlet upon the upper portions of the body & is extending to the trunk & lower extremities - concentrating its virulence about the joints of the hands & soles of the feet - giving rise to swelling & stiffness in those regions -; there are also - in those parts where the rash is most strongly marked - numerous crops of those small miliary vesicles which frequently make their appearance in this disease -. The respirations is increased in frequency & the hearts contractions

so distressingly rapid as to demand the aid of Digitalis to control them.

Tuesday. The desease appears to have attained its acme; the frequency of the pulse is somewhat reduced by the digitalis. nothing further demands special remark.

Wednesday. There seems to be some very slight mitigation in the violence of the symptoms. the tongue has commenced casting its fur. The pulse has fallen to ninety & the nervous system is more calm &c.

Thursday the sixth day. There is a very decided improvement in the general condition of things. The heat & aridity of skin is beginning to subside. its scarlet tinge to fade. The vesicles to dry up. The countenance to clear & The intellect to brighten. The pulse has become softer slower & more natural. The tongue has thrown aside its frosty covering leaving the surface raw & red with inflamed papillae shooting from it. The inflamation of the throat & fauces is

beginning to abate - & some desire for food to return.

7th Friday. Now commences the process of desquamation. The cuticle peeling off in large flakes - proceeding in the order in which the eruption occured - leaving the cutaneous surface in a delicate & tender condition -. The patient being now very susceptible to the slightest vicissitudes of temperature great caution is to be observed in order to escape the liability to any of those dangerous sequelae so often attendant upon convalescence from Scarlatina - but nothing occurred to impede a rapid return to health - in the course of a week the patient left the House fully impressed with the idea, no doubt that contact with its walls is the only thing requisite to secure relief from all the maladies to which humanity is subjected — -

Edward Harris a negro man of herculean pro-
portions - thirty nine years of age - whilst walk-
ing along the street on the afternoon of the twenty-
sixth of April was clandestinely struck a heavy blow
upon the head with a billet of wood about two
feet in length & three inches in diameter. He
was considerably stunned at first but the shock
soon passed off & he apparently had suffered no
material injury for he walked away unassisted
& without complaining of much suffering -
On the morning of the twenty seventh he was dis-
covered in a stable lying in a state of unconscious-
ness & was immediately conveyed to the Infir-
mary - Those who brought him could give very
little account of him - further than that he was
a great pugilist & very fond of rum -
Eighteen hours after the injury he was found
to present the following symptoms - perfect un-
consciousness & insensibility to external im-
pressions - general muscular paralysis - inabil-
ity to swallow - loud stertorous breathing - number-

ing twenty four - pulse distinct - laboring - full firm & slow - pupils much contracted & insensible to the stimulus of light - Skin hot - large drops of perspiration upon forehead & face & regurgitation of bilious matter from stomach - ; there was no lesion discoverable upon the scalp nor fracture of bones of cranium - - Diagnosis - compression of brain. produced in an intemperate habit by a violence applied to the head - - - Venesection to a considerable amount was immediately practised - proto-chloride of mercury ten grains placed upon the tongue & a stimulating injection of oil of Turpentine - oil of olives mixed with Starch administered.

At five oclock P.M. the pulse was still full & firm more frequent being ninety six - respiration stertorous & forty - venesection was repeated.

On twenty eighth - free discharges from stomach & bowels - pulse less resistant than yesterday - & increased in frequency - being one hundred - breathing thirty six & somewhat softer - but

not the slightest indication of returning consciousness - A small amount of blood was again taken from the arm - The scalp shaved & a blister applied & dressed with mercurial ointment - Mercurial unctions to the inner surfaces of the thigh & three grains of the submuriate of mercury rubbed up with sugar placed on the tongue every two hours - But all these efforts failed to revive the patient - Towards afternoon the ~~patient~~ he began to sink very rapidly - pulse became feeble & irregular - respiratory passages clogged with mucus - & at half past seven he died - The blood drawn during the morning of this day was highly buffed & cupped -

Post Mortem examination made sixteen hours after death - There was no fracture of the tables of the cranium - The arachnoid & pia mater membranes were intensely injected with blood & beneath the latter membrane upon the temporal portion of the left hemisphere of the brain between the anterior and middle

lobes - There was a considerable effusion of serum
The lateral & inferior portion of the anterior
& middle lobes of the left hemisphere was
broken up by a clot of blood about the size of
an English walnut -; in the left lateral ventri-
cle, extending into the aforenamed portion of
the substance of the brain was found about six
drachms of bloody serum & also one drachm
in the right lateral ventricle & half an ounce
of blood at the base of the brain -. With such an
amount of lesion & laceration as this - the wonder
is not that he died - but the greatest wonder
that he lived so long —

This is a case illustrative of the deterioration which
the cerebral vessels undergo when subjected for a long
time to excessive stimulation -. It is not an unfre-
quent occurrence that a slight blow inflicted upon the
cranium of a person addicted to habits of intoxication
gives rise to fatal lesions of the parts within its walls
whereas the same injury in a sober healthy habit
might be productive only of the ordinary symptoms of cere-

bral concussion. It is really surprising that such an extensive amount of laceration as was revealed in the present instance should have resulted from an injury which insufficient to affect any appreciable solution of continuity, either of external coverings of the cranium or of the bony parietes themselves & could only be accounted for by supposing the vessels of the brain to be in a condition of degeneration.

An Inaugural Report of Cases Occurring at the Baltimore Alms House during the Months of June & July 1849, Submitted to the Examination of the Board of Regents, and Faculty of Physic of the University of Maryland

— by —

John C. Eccleston. A. M.

— of Maryland.

Introduction

Correct Pathological Knowledge has been justly Considered
the Correlative of accurate Diagnosis; without the former our
Information Concerning Disease can never be aught but
Hypothetical; unguided by the latter our Therapeutics Can
at the best be only an all sufficient weapon (per se), wielded
by an unskilled hand against an inciduous enemy.
If we admit that the practice of Medicine depends
vitally upon infallible Diagnosis, and that we cannot
be too stringent in even the most common case: to what
an extent, does the Obligation increase, when instead of
the ills that checker the life of man, we are called to
contend with fearfully malignant Epidemics; that visit
us ever and anon, and which it is often our Opprobrium
to confess "We know not whence they come, or whither they
go." Such an Epidemic has recently been in our midst;
advancing onwards in a determined course, & at length
leaving us as suddenly as it invaded. Such an Epidemic
may we long be found amongst us again, hence in view
the vast importance of a correct knowledge of its Causes,
nature, and treatment, I devote to this much desired
attainment "My" Inaugural Dissertation"; humbly though
confidently trusting in the potency of facts and necessary

deductions to show = That the Negro fever that rag[ed] at the Baltimore Alms House during the Spring and Summer of 1849; was and is, identical with the Bulam fever (of Pym), the Gibraltar fever of Lewis; or the "Typhus Icterodes of Cullen."

"History of Invasion."—

"Towards the close of the month of April 1849 a great increase of Negro patients from the city of Baltimore filled the Alms House Wards to such repletion: that the Public Authorities were forced to establish a special Hospital for their reception and treatment. A vast majority of these patients, had been residents of filthy crowded localities situate in narrow Alleys and Streets— Sleeping on low damp or damp cellars— fed upon the refuse of the most offensive and vegetating kind like humans, than like the swine and dogs that not unfrequently participated in their bed and board. The vicinities of canal St., North and South of market, Brandy Alley, & Fells point, produced more cases than any other section of the City. A knowledge of these localities, would satisfactorily convince, of the facilities they afford for the development of the most virulent poisons. In exemplification of this, I give the testimony of an intelligent Physician— a member of the board of health

who in his official Capacity entered a cellar of Dealers Castle: an old building near Canal St.: and detected two negroes, the remnant of a family of five, still, in an advanced stage of the "Fever". Of the three others, two, (the Father and Mother) were lying dead in a corner of the apartment; whilst the third perished, as he was conveyed to the Hospital. The same Gentleman states, that in a sink in the floor was a barrel, 2/3 rds filled with excrement and decaying matter. Finally—through the middle of the cellar, coursed a gutter Continuous with the adjacent street, and from which at the time he entered a number of swine were feeding =.

The causes, that first particularly directed the Medical attention to this Anomalous disease, were the palpable and almost universal faundiced appearance of its subjects; the short duration of its symptoms, and its fearful tendency to a fatal termination. That this Fever was Infectious, none familiar with its March Can for a moment question; that its vehemence was much increased, by the presence of decaying vegetable matter, an acquaintance with the history of its victims must make apparent; it will also the fact of its abatement, and final cessation, under the sanatary and cleansing enactments of the City Others.

The following Cases and remarks are designed to show = That the Fever observed at the Baltimore Alms house during the Spring and Summer of 1849 was the same in origin and effect with that descr by Louis Chenin & Trousseau as obtaining at Gibra in 1828 — modified to certain extent by climate, pre-ex Endemic laws, and Hygienic regulations — but in its Les concomitant affections, and symptoms (not dependant the above mentioned circumstances) — one and identic — And to accomplish this I propose 1st Several cas which may be considered as types, and analogous to om others reported by my fellow Students — 2nd A tabular view the symptoms and Post Mortem Changes as they obtained in the two Fevers — And lastly an Analysis of these, the agreement and variance — and the reasonable ground have for the classification proposed.

An Analysis of the blood by Dr Frick — gave the following result

	average	case 1st	case 2nd	case 3rd
Solids in 1000 grs	———	187.029	138.843	163.590
Water — do	———	812.971	861.157	836.410
Fibrin	4.382	3.318	4.416	5.388
Globules	91.274	120.832	61.666	91.334
Solids of Serum	69.824	63.879	72.716	66.888
Iron	0.650	0.700	———	0.600
Lime	0.195	0.202	———	0.188
Chlo Soda	4.192	4.884	———	3.500
Phos Soda	1.449	1.498	———	1.408.

This blood was taken from very severe cases of the Fever.

The clot in all cases was fo buffed and firm. The Urine contained in some cases the elem of Bile. —"—

Case 1st "Baltimore Alms House June 10th "

George Stewart a Negro æt. 24, of moderate embonpoint, entered the Fever Ward at 9 o'clock A.M. in moribund condition, from "Canal St. near City Block". The Police officer stated that a man & child had died in the same apartment from whence Stewart was taken, with what he styled the "yellow eyes" - a coexistent symptom of the patient's). He complains of no pain - intelligence unimpaired. Constant desire for water which is thrown from the stomach as soon as taken. Pulse very feeble. Died at 10 o'clock A.M. sighing deeply, and breathing with difficulty, though perfectly conscious. Autopsy two hours after. Exterior. — a universal yellow tinge. Considerable cadaverous rigidity; muscles natural. Chest. — Cartilages of sternum deep yellow. more fluid in pericardium than usual. a quantity of dark blood flowed from the cava upon division. Tissue of heart deep yellow

No trace of clot in either ventricle. Endocardium tinged yellow. Lungs — a quantity of Ecchymosed spots on left lung. Upper lobes crepitant, Lower lobes less so: Points of Pulmonary apoplexy through out Lower lobes of each.

Abdomen. — Stomach contains about ʒij of dark fluid (greatly resembling Solution of Copper) with flakes of mucous floating through it; presents most exaggerated capillary congestion. Mucous surface excessively corrugated (resembling in form Earth worms) — much softened and thickened.

Ileum. — its Patches perfectly healthy; Mucous membrane thickened, softened and excessively red Follicles of a deep red tint — from injection of Capillary vessels: found a number of Follicles capped with ~~with~~ a livid lymph, which when scraped off presented a point of extravasated blood. Most of the Follicles about the colour of currants, enlarged & occasionally pointed with effused blood —.

Brain. — inner surface of dura Mater of a deep

Yellow tint; no such hue in Arachnoid, Pia Mater or Medulla Oblongata.

Kidneys. — some of the Malpighian tufts present points of Apoplexy.

Spleen. — About four times its normal size consistence of Dash berry Jam; of a slaty hue. exposed to the air, it becomes a deep red.

Liver. — Little larger than normal; no softening of an orange colour: upon pressure blood exudes from cut surface. More firm than normal (probably resulting from old inflammation).

When torn the liver presents a more than granular appearance.

The main points of interest in this case are the lesions of Stomach and Isolated Follicles. — The last symptom occurred but three once during the entire Epidemic. The crusts of Lymph resembled somewhat the Pustules of Variola when five or 6 days old, only less elevated & with more diffused base.

Case 2nd Saturday June 9th

"Lloyd Stevenson" æt 35 – a Negro of well developed frame was admitted into the hospital upon this date, from Brandy Alley a filthy Offensive place. Has lived very uncomfortably and imprudently – drinking alcoholic stimuli – and sleeping in a crowded apartment upon a damp floor Commemorative history} Was taken five days since with chill – followed by high fever – with acute pains in head, limbs, and back; dizziness & tinnitus aurium. Three days prior his admission, he took an Infusion of Podophyllum (may apple) which acted as a violent Emeto Cathartic. Since then his bowels have been daily moved twice or thrice daily. Present Condition. — Great Prostration; much tenderness over Epigastric & right-hypochondriac regions; Pulse 102, feeble –; skin hot & dry; Eyes yellow and injected; tongue covered with yellowish fur in the middle, tip & edges moist; much pain through the limbs; bowels moved twice today, watery. Ordered — Calomel and Sr. xij statim ——

June 10th " 8 oclo " A.M. Bowels moved six times since last seen. Complains of pain in his head - Pulse skin, eyes, & tongue the same as yesterday - ordered Pulv. Rhei gr XV - statim - also Sulph. Quinine gr. V. every 3 hours, 7 oclo " P.M. Patient feels better, bowels moved twice since last seen; evacuations look like strong Sol of Copper; urine very yellow offensive ammoniacal odour; complains much of constant singultus.

Monday June 11th " 8 oclo " A.M. Much worse; skin cold and moist; no uneasiness in head; perfect Consciousness; severe pains in right shoulder; eyes of deep gold colour expressive tenderness over Liver; pulse very feeble; respiration quick - ten minutes after leaving him he died perfectly sensible.

Duration of illness ten days - Autopsy four hours - after.

Exterior. - Embonpoint moderate; Considerable rigidity; yellowish Colour universal.

Chest. - The surface of Lungs presents numerous red spots of extravasated blood below the peritoneal membrane; this appearance mingled up with a quantity of melanotic matter. Lower

lobes congested too deeply to be Post-Mortem.
Heart.- filled with dark fluid blood; some flakes
of lymph on right Ventricle the result of old Pericarditis
walls more flaby than usual. Ventricles containing
no trace of fibrin; valves and chordæ columnæ of
a yellow tint. Abdomen.- Peritoneal investment
of the Intestines deeply injected; some water in the
abdominal cavity. Stomach and intestines retroinjected.
Stomach filled with about a quart of dark grumous
fluid, with flakes floating therein. The outer coat
exhibited through the Peritoneal investment, numerous
ecchymosed specks - with dark spots of blood
subjacent to the mucous coat - and visible through it.
much pointed Capillary Congestion; particularly
about the Pyloric extremity; Mucous coat converted
to a soft pulp, much darkened and convoluted;
the whole surface of Stomach covered with tenacious
mucous; attached to the lesser curvature a large
melanotic gland. Intestines.- occasional spots of
ecchymosis shewing through mucous membrane,
thickened, softened, and corrugated - except at

Peyers glands where it was softened but not thickened, the Patches being less thick than the mucous membrane around. Kidneys.— of ordinary consistence, every where deeply coloured with bile; congested with blood which is easily expressed from the cut surface. Liver.— larger than usual deeply congested in its capillaries; the blood showing in fine points throughout its parenchymal covering. A mottled surface from a mingling of red and yellow.— Gall bladder.— much distended with dark viscid bile, of a greenish black colour, softened but otherwise unaltered. Splenn.— Larger than normal, a little softened.

Mesenteric glands.— Enlarged, otherwise normal.

=Remarks= It will be observed that this case varies materially from the 1st, both in the lesion of the Follicles, and the difference in the consistence of the Splenn. The most important lesions afforded in this case are, 1st The acute inflammation of the Stomach; 2nd The dark fluid contained therein, 3rd The Ecchymosis along intestines, & lastly the congestion of Liver, Kidneys, & Splenn.

Case 3rd = June 17th 5 oc. P.M.

Stephen Berry a Negro at 32 of small person - good expression, entered the Ward with symptoms of the prevailing Epidemic.
On Thursday last he left his home on Fells Point to nurse a Negro man who died the following Saturday with a disease he calls the "Yellow eyes" - Commemorative History. On the Thursday alluded to he was taken with great uneasiness and weakness in his limbs. Friday he had two chills, followed by fever and intense headache with pains through his abdomen. Present symptoms - Monday eve pain on slightest motion - tongue yellow and dry - pulse 113 quick and full, skin hot & dry, abdomen tympanitic - ordered V.S. ol Terebinth gtt xxx ter die.
Tuesday Morn. 18th - Bleeding abated the pain in his head - & reduced his pulse to 99 in minute bowels moved twice last night; very watery and of a yellow tint. Still much pain over liver - Ordered four cups over the seat of pain. Urine very highly coloured with bile - ordered Sul Quin Zss } ft Pulv vj ter die

Case 3rd Continued

- to alternate with the ol Terebinth = diet Beef tea & strong Coffee.

Wednesday 9 o'clo A.M. Patient greatly improved bowels moved but once last night - slept well - pulse 79, soft: skin normal. Complains of no pain except in his head when he rises to evacuate his bladder or rectum. Tongue clearing up - eyes less tinged with bile. Urine very copious - of a more natural colour than yesterday - only slight pain elicited by pressure over abdomen. Continue same treatment.

Thursday 11 o'clo A.M. increased improvement; bowels moved twice last night: Patient out of bed - Continue Quinine & Terebinth.

Monday 24th = Discharged cured.

Remarks - The rapidity of the convalescence in this case is truly astonishing = The great practical deduction from this case, & several others, appears to be - 1st free Venesection during the initiatory fever which lasted in most cases - 24 or 36 hours = then free use of Quinine.

Case 4th = June 9th 6 oct P.M.

Upon this date George Smith a Negro at 32 resident of "Ale Alley" - of good Constitution and moderate embonpoint entered the Fever Ward He says he is temperate, has had good food and lodging. Commemorative History - Until Tuesday last has been employed upon the wharf, upon that day he was taken with a chill followed by a high Fever and much pain in head & limbs. Present Condition. Eyes much injected with bile skin hot and dry, pulse frequent and feeble. Considerable pain and tenderness over abdomen. Bowels evacuated twice today - Complains of insomnolence also of a Cough arising from slight Bronchitis. Ordered Pil Hydrag gr XV - station - Tinc Opii gtt XXV tonight.

Sunday 10th A.M. - Bowels moved once last night, - a bilious evacuation. Pulse much weaker 102 minute ordered Brandy Ezs every 3 hours with gr v Sulph Quin in each dose. = 8 oct P.M. Patient excessively feeble Complains of much pain about right Acetabulum.

-ordered Calomelanos gr x - Pulv Opii gr ij = tonight
- Monday 9 o'clo A.M. patient moribund - slept
but little last night; pulse 95 in minute
intellect clear, answers questions rationally -
complains of no pain - died perfectly conscious
at 3 o'clo P.M.

Autopsy seven hours after death
Exterior. - Eyes & Fibrous tissues much injected
with bile; No emaciation. Chest. - Lower lobe
of right Lung shows occasional points of Pulmonary
apoplexy. Heart slightly hypertrophied, left ventricle
containing clots of deep yellow colour - right ventricle
also filled with Fibrin extending into pulmonary.
Walls very flabby as are also the muscles of the
whole body. Stomach - mucous coat softened
and thickened - glossy mucous covering it, much
pointed injection; this organ contained ℥ss of
a dark fluid, with some flakes of mucous
floating through it. Intestines - mucous coat
presenting yellow tinge, some portions of it exhibit
the small vessels much injected with blood.

— No alterations of Peyer's patches or isolated follicles. Splenic Consistence of pulp very firm almost totally disorganized.

Case 5th June 4th

On this date John Bond at 32 a Negro of robust appearance a resident of Eutaw below Montgomery St. entered the Fever Ward. Has led a very intemperate life. Commemorative history - 12 days since he was taken with Chill followed by considerable Fever & pain in his head. This pain combined with disorder of his bowels has continued unabated to this time - also occasional vomitings of a bilious nature.

Present Condition = much pain and swimming in his head when he sits up or attempts it. Conjunctiva, Sclerotica and tongue much tinged with Bile = the papilla of the latter much elongated. Unable to lie upon his right side. Dulness upon percussion at the base of both Lungs. Shrinks from the slightest pressure over Liver and Stomach = abdomen tympanitic - great irritability of muscles - bowels to day Costive = Ordered Sal Roch ℥j statim

Tuesday 5th General Condition the same as yesterday - 3 evacuations last night. vomited twice - a yellow bilious fluid - pulse 108 - small - respiration hurried - ordered Sulph Quin gr xxx - pulv iij - one ter die = Diet Beef tea.

Wednesday 6th 9 oclo A.M. Condition of patient much worse. Some headache and dizziness though perfect possession of his faculties. Abdomen much distended. Pain elicited by pressure over its surface. Respiration much accelerated. Pulse 124 in minute. Early this morning he was taken with Epistaxis (produced by the tone which the quinine gave to his circulation). which was only subdued by use of Tampon ordered ol Terebinth gtt xxx ter die with grx Quin

Thursday 7th = A.M. great prostration from loss of blood. about 10 oclo patient attempted to rise from bed for stool = was taken with fainting and expired in ten minutes. } Autopsy 13 hours after.

Lungs - Splenization — At the base of each. Heart flabby and hypertrophied; no clot in left side, Blood very fluid; and of a dark black colour. Mucous coat of stomach injected and softened. Intestines distended with flatus; the mucous coat injected, no alteration in Follicles or Patches. Liver bright yellow colour, large and softened. Kidneys quite yellow. Spleen much enlarged and softened - Muscles and fat injected with bile.

"A tabular view of the symptoms of the two fevers, taken from a =

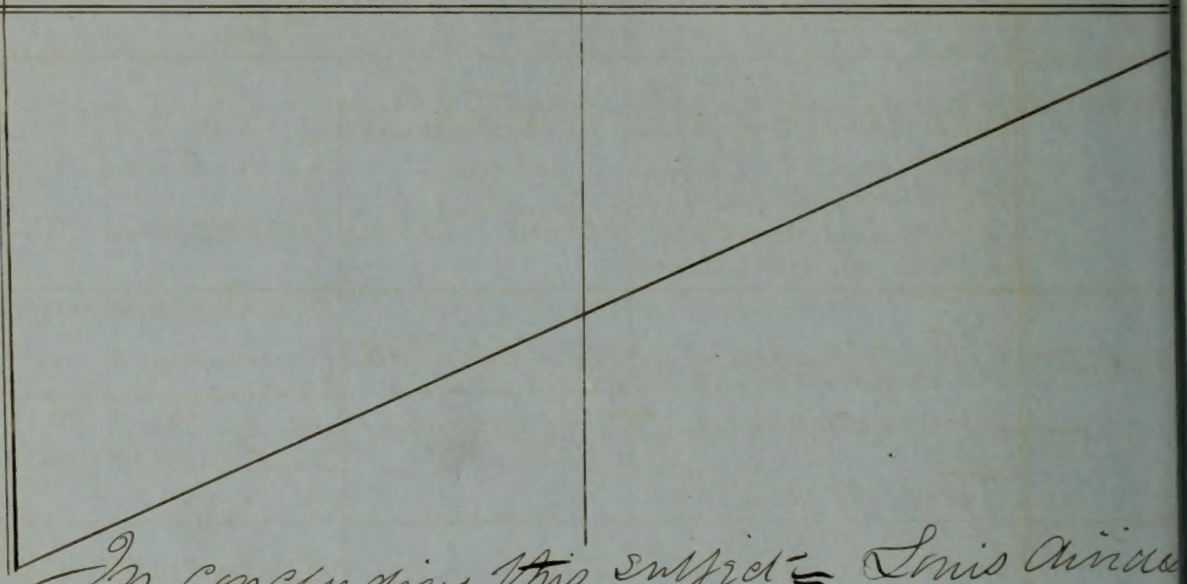
...ptoms.	Compiled from Louis work on "the Gibralter fever of "1828" average" of 32 "cases."	Compiled by Dr Frick - from 19 cases taken at the Balto Alms House
...e of — ...asion. — — — —	Usually with an intense head-ache, chills, pain in limbs & back. Thirst very great, Anorexy complete. Eyes red, glistening, suf-fused. Intense heat rarely followed the first chill.	Pain in back & head; chill follow-ed by high fever; Anorexia and thirst generally present.
...lse — — — — — —	Its frequency diminished progressively from the 2nd day of disease, so that it passes from 190 pulsations, to 80 or 75 in the minute.	— In Fatal cases averaged 107 — in recoveries — do 106 —. Diminished in frequency from the first 48 hours of disease.
...gue — — — — — — — —	"The tongue of the Yellow fever patients at Gibralter had no characteristics = peculiar to that disease = Though more generally white and villous, & the seat of hemorrhage than in other disorders."	— Coated in all, yellow in far the larger number; in others — white, black or brown. in a few cases (2) much swollen; in one, the papilla much enlarged.
...n over the ...r & Epigas-...m.	Many complained of pain in Epigastrium the first day — others upon the 2nd or 3rd. increasing in severity as the diseased advanced.	Very severe upon pressure in 4/5 of the cases — commencing after the first 12 hours, or sooner.
...miting =	Thirteen in fourteen cases vomited = some on the first day = others after 1st 12 hours	— Was ascertained in the large majority of cases — in those that recovered it was not found

	Gibraltar Fever – Continued	"Alms house Fever – Continued
–	– the vomiting was repeated every day. At first it was clear, then more or less yellow, then "black.	– The matter vomited often greenish mixed w[illegible] yellow – "in some cases yellow".
Bowels	Generally Constipated	In half the Cases Consti[illegible]
Intelligence	"Of 16 Cases – Seven retained their Senses, the other nine slightly delirious.	"Of 19 Cases = 8, dull and s[illegible] (6 fatal 2 recovered); in one delirium (fatal); 3 came the Ward Comatose (2 fatal, 1 [illegible] 7 remained thoughtful (4 fa[illegible] recovered).
Hemorrhage	very frequently occurred from the tongue (particularly when Calomel had been used) = Epistaxis occurred also. The principal number of Hemorrhages, were from the Gastro Intestinal Mucous Mem[illegible]	Epistaxis was present in [illegible] out of 12 Cases = Gastro Int[illegible] also very frequent.
Eyes	deeply injected with Bile	Conjunctiva of a deep yello[illegible] sometimes both injected a[illegible] Ecchymosed = rarely white
Duration	Duration varies much according to severity of symptoms from 2 days, to 6 and 7 – &c 10:	In 19 Cases 1 died in 6 days; [illegible] 1 in 8 days, 1 in 9 days, 2 in 10 days; 1 in [illegible] 1 in 15 days; 1 in 16 days; one not no[illegible] Average 10 days: of seven reco[illegible] 2 were Convalescent in 10 days, 1 [illegible] 3 in 16, one in 17 – Average 1[illegible]

A tabular view of the most important Post-Mortem Changes - as they occurred in the two Fevers

	Gibralter Fever	Alms House
surfaces	- Yellow tinge Constant	In 12 Cases - 9 were a deep yellow tinge - in 3 no notice was taken.
rain	An inconsiderable quantity of serum was occasionally found in the Arachnoid Cavity and the Lateral Ventricles - the Pia mater was rarely injected. The Cortical substance of Brain was rose or violet in nine cases.	In those examined of a perfectly natural appearance except being tinged quite yellow
ngs --	Often effusion of more or less blood which deprived the surrounding tissues of air.	In 12 Cases } 2 were healthy, of the remaining 10 - one had tubercles, 2 oedema, 2 pneumonia, and 4 splenization. In 7 of the 10 there were ecchymosis, and in 3. ecchymosis and pulmonary apoplexy.
art -	Was flaccid - softened or less coherent than usual - in 5 cases found Lemon colored serum in the Pericardium.	Flabby with clots of greater or less size in the Ventricles. The Internal membrane very yellow,
ver	Of greater size than natural in two cases; little firmer than usual in 3 cases, a little less firm in 3 others. Its colour was altered in every case. Sometimes the hue of fresh butter, again straw yellow, a clear coffee and milk color - sometimes of a gum yellow - sometimes an orange yellow.	Fluid blood exuded in large quantities when cut - in some cases increased in dimensions. Capsule easily detached in some. Colour in more ½ - bright yellow in some yellow mixed with ecchymosis - some few (one) brahog any colour.
mach	Mucous membrane thickened in half the cases; softened and yellow in same number. In 3/4 of the cases it contained a clear or dark red colored liquid, a blackish, or perfectly black fluid in different quantities.	Mucous membrane, thickened and sotened - contained very often a fluid mix - resembling soot and water. In many cases spots of ecchymosis were found.
l Intestines	Peyers patches were always healthy. The intestines contained in 2/3 cases a greater or less quantity of reddish, brownish, blackish, or perfectly black matter.	Peyers patches healthy - Mucous membrane thickened & softened.

Small Intestines =	Its mucous membrane injected or red – in less than half the Cases. Its consistence diminished through its whole length.	
Spleen	Was softened in 8 Cases it was larger than usual in 5 Cases.	Condition of this Organ not s in 4 cases – in the Others 8 so and softened. in one case it Increased to 3 times its Normal in another to twice its — do.



In concluding this subject = Louis divides these Lesions into 2 classes, Some of them peculiar, or al exclusively peculiar to subjects dying of Yellow Fever; Others C to those subjects, and to subjects who have died of other acu diseases. The Red or Black matter found in the Alimen Canal, and the alteration of Colour in the Liver, are of First-Class – all the other Lesions of the second.

Before proceeding to show the great identity of the two Epidemics; it were well to show what is or Constitutes Yellow Fever = This may be well done by exclusion = but better by a Condensed enumeration of the symptoms detailed by Louis. This author asserts that Typhus Ictoroides exists Sporadically at Gibraltar and may there be developed independent of any foreign cause. Sporadic cases are reported by him as Yellow Fever, (modified by extraneous circumstances, but near the top definite) having top Analogy to the disease seen by him in 1828 than the Fever we are studying = The absence of one or more symptoms in any case of disease can surely never shake the validity of a diagnosis; when the pathognomonic mark can be apparent)) Hence if we make the Characteristic Lesions of Yellow Fever to be =(Black fluid in the Stomach - vomited or not = inflammation of the mucous membrane = a peculiar Yellow Colour of the Liver with alteration - also yellowness of the skin ;) then it Concerns our Classification very little about the origin and Spread of the Contagion. If the disease may occur Sporadically at remote periods at Gibraltar - first - mild Comparatively and then Contagious

after wards became evidently more virulent and injurious;
If, according to Dr Bryson's "Report of the diseases of
the Apican Station" an Endemic Fever is seen every
year in Sierra Leone which is most prevalent in
the Coast and most crowded parts of the town
and arises according to the opinion of all who have
witnessed it from local causes; being presumed
non Contagious = If again, this fever at certain
periods acquires a great development and becomes
Epidemic its symptoms remaining the same, though
much heightened in intensity = If the remissions of this
fever become much less common - black vomit more
frequent; the mortality much greater = If in addition
to other modes of propagation it is ascertained to spread
occasionally by Contagion = Why I say (if upon the
Authority of Dr Bryson, Louis Sir William Pym, and Prof Dixon
such Phenomena may and do occur at Sierra Leone,
Gibraltar and the Southern Coast of our own Continent)
may not the same obtain with us? — In elucidation
of this Theory of development, from simple endemic (or
Bilious Remittent Fever) to Contagious Yellow Fever = We are told

that" H.M.S. Bann with a crew of healthy men
touched in 1823 upon the coast of Sierra Leone – where
was at that time prevailing, the usual endemic
fever of the country. After remaining some two months
her crew gradually became affected with a much
more severe form, than was peculiar to the acclimated.
Eventually the "Bann" sailed for "Ascension" (having
lost many of her men) into which place she introduced
a Contagious form of fever – whereas before, there had only
existed the usual Endemic or Remittent. – – –
From the study of these Facts, how just becomes the
deduction = That the change of fever from Endemic
and non Contagious, to Epidemic and contagious – depends
partly upon some increased development of the active
cause; and also upon the fact; that in the Examples
given; the arrival at the place of unacclimated
persons has exactly coincided with the Epidemic
diffusion of the poison." – "

Now as no valid distinction
has ever been established between the Contagious and
the Malarious Yellow Fever – it cannot be presumptuous in me

with such an array of facts as are ~~the~~ presented by the Sierra Leone - the Ascension, & the Gibraltar cases to Consider Yellow Fever as a derivative from Endemic Fever, and as dependent upon Malarious Remittent, for its origin and continual virulence, as is the ordinary Pernicious Fever upon the poisonous exhalation, that in a smaller dose would have been concentred to present in a simple Quotidian or Tertian —. Let a Practitioner be called from a mild case of Malarious Fever, to witness a sudden incursion of Epidemic Yellow Fever, and he might look in vain for the connecting link —; but take that man to the Coast of Africa — let him witness the Endemic disease as did Sir Alexander Bryson — let him see the "conversion of the Non Contagious into the Contagious going on before his eyes." in the cases in which Ships having been exposed to and having suffered from the Endemic Fever, afford evidence that this fever (or one indistinguishable from it) was actually capable of propagating itself by Contagion, — and he would find it an arduous task to draw any line of demarcation between the two affections.

— And entering more minutely into the pathology of the two diseases as they approximate nearest to each other, viz (in Pernicious & Yellow Fever) — do we not find a startling analogy throughout? What means the sudden decrease of Pyrexia — "the Fatal lull" of contagious Yellow Fever? but the more successful attempts, that nature makes in establishing the reaction in Pernicious Remittent? — Why is it? that the malarious leaven which first excites a simple ague, should progressively obtain to less complete remission until at length it ends in Pernicious or Malignant Fever? but that some addition has been made to the poison (of the same nature) only differing in intensity; — just precisely as has been shown to occur in the examples given; and just analogous to what we saw during the last summer. To elucidate this, an exceedingly interesting circumstance may be stated, (taken from Dr Bryson's manual) "In July 1847 a blockading party of 30 men were detached to the Banana Islands They held no communication with any other persons sick or healthy. On the 14th of August a case of Endemic

Fever occurred, such as was, and generally does exist in that region. Other cases soon followed = the first few mild = then gradually merging into that designated Malignant or Yellow Fever; with its characteristic symptom, black vomit". How admirably does this bear upon our Negro Fever - First came the exciting cause of all, Malaria. the effects of this, being always more or less prevalent in our city - failed to arrest our attention. Gradually working its way, we see it gaining in intensity encouraged by the filth and misery of those amongst whom it operated; and probably taking advantage (for its future violence) of the more than usual impure condition of our City - which existed at that time - At length the disease reaches its extent of virulence - and now we see all the more important symptoms of Malignant or Yellow Fever" viz yellowness of body - peculiar orange colour of Liver, existence of black fluid in the stomach - great thirst - decrease of pyrexia - and fearful mortality. But the question may be asked - Why should the malaria which is always present - produce such fearful results at one period

and be content with a more moderate development-
at another do we not always have with us the
Materies Morbi We answer in the affirmative as
far as is appreciable to our senses. But who can
doubt the existence of a principle too subtle to measure
or to bring within the scope of the microscope or the
influence of chemistry; that principle in a word
the expression of whose action we style (because we
can find nothing better) Endemic & Epidemic, Contagious &
Non Contagious. This it is (be it Terrestrial, Atmospherical,
or Sidereal) that renders Remittent Fever developed to
Yellow Fever Contagious, under similar conditions to those
that impart the same character to Erysipelas, Influenza
and Cholera; and under these conditions it is propagated
by the same laws. If as remarks Sir Alexander
Bryson Yellow Fever be a distinct disease it cannot be
diagnosed in its sporadic form from the common
Remittent Fever of the same regions; in its Epidemic
form its existence can only be ascertained or suspected
by an unusual increase in the number of cases,
And the more frequent occurrence of Black Vomit.

Now let us examine the application of this fact to the late Epidemic. Any one who studies the cases of Sporadic disease reported by Louis cannot blind himself to the identity of many of them with cases of the "Alms House Fever".

But can any one infallibly draw the line of demarcation between those cases of Louis, or any other cases of Sporadic Yellow Fever and the Endemic of the same region? — Surely not — for until the poison has matured into Epidemic, it functions too much where the two its features are too much masked.

Louis himself teaches us the same truth (viz That Sporadic cases are the connecting links in the great Malarious Chain when he says "That after examining the symptoms observed in 19 cases and the lesions found after death, it was clear that the diagnosis was often incorrect; that many cases considered as examples of Sporadic Yellow fever, did not belong to that disease but on the other hand it would be difficult not to recognize that disease in some of the cases.

— Reverting for an instant to Dr Bryson's remark
where he says "that the Epidemic form of Yellow
Fever is only distinguished (over the Sporadic form)
by an increased number of cases, and the more
frequent occurrence of Black vomit" — we find
an immediate verification in Louis diagnosis.
For though through want of severity of symptoms
he discards many so called Sporadic cases, still we find
him asserting positively, the case of Dominique Benoit
3" (noted about the same time) to be undoubtedly Yellow
Fever. And why, it may be asked! this case more than
the others? we have his answer = "because the violence
of the symptoms (i.e. great yellowness and black vomit)
resembled those observed in the severest forms
of undoubted Yellow Fever" — = which is exactly equivalent
to saying, that in many of the Sporadic cases, the
poison had failed of its maximum intensity; but
in the case of Benoit A full development was
attained, and so far as he was concerned, it was
true Epidemic Yellow Fever.

Finally this last-

– clause of Dr Boyer's Remark finds another and to us all important verification in the "Alms House Cases" – in which, the virulence of the disease, the important symptoms &c &c all attested "That the Materies Morbi had reached its perfect development" & that there were two cases of Epidemic Yellow Fever.

In Conclusion = We deduce from what precedes —

1st That the Alms House Fever of 1849, was one and the same with the Gibraltar Fever of 1828.

= Vide = Symptoms. =

2ondly That both of these were derivatives from the Endemics of their respective regions. = Vide page 19 =

3rdly That Sporadic Cases frequently occur, and appear as a Media via between the Endemic & the Epidemic

4thly That Yellow Fever prevails principally at low levels, in filthy and crowded places; and that it invests particular spots independently of Contagion

5thly That the City of Baltimore contained within her limits every material necessary for the production of the disease viz A degraded and destitute population; Malarious exhalations &c (as the sequel has evinced) — that unknown Angency that presides over every Contagion and Epidemic.

Lastly That if, the Fever observed by Louis Chervin, and Trousseau, at Gibraltar in 1828 —

— be true Yellow Fever — then must the Alms House Epidemic of 1849 be the same. Whence it follows = that we have just framed for classifying it with other Epidemics of Typhus Fetwoides, = = which was the Object proposed —.

= Finis =

— J. C. Eccleston.

An

Inaugural Dissertation

on the

Pathology of Fever,

Submitted to the examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland

for the degree

of

Doctor of Medicine

by

Jams. A. Stewart

of

Maryland

The history of practical medicine, consists of little else than a review of the doctrines which have successively risen and sunk again concerning the nature and treatment of fever. Whatever other objects of interest or importance within the dominion of Medical Science may have attracted the attention of Physicians, Fever, has at all times been viewed as presenting the most extensive and inviting field for observation and exercise of ingenuity.

It is in this department that observation and research have been most industrious in accumulating materials and that hypothesis has luxuriated in her wildest exuberance.

When indeed it is considered that the Destroying Angel, has made his

most desolating visitations, under the form of febrile epidemics; and that in the long list of human maladies, fever, occurs in perhaps nine cases out of ten, the paramount import-ance of this subject is strongly forced upon our convictions.

"If we except" says Van Swieten, "those who perish by a violent death, and such as are extinguished by mere old age, and which are indeed few, almost all, the rest die either of fever, or of diseases, accompanied with fever. I read in Pliny" he continues, "with what fear and trembling the Romans endeavored to have this universal disease, fever, appeas-ed by their supplications, in the temple of Tanum; and hence perhaps it is, that fevers are called diseases by Hesiod, and that Horace calls

all diseases simply fevers, when they rushed out of the box of Pandora."

In glancing back upon the pages of the history of our science, We find it impossible to avoid the acknowledgement that there is no subject better calculated to humble the pride of human reason than the one now under consideration.

It is now near three Thousand years since the mind of man has been engaged with it, and during all this time has it been in a continued state of revolution and instability. Theories have risen and sunk again in a continued and rapid series of succession; each has had its hour to "strut upon the stage", and its votaries to yield it faith. Although the stream of time has hitherto overturned

all these unsubstantial though often highly wrought fabrics one after the other in its steady onward course.

It may be safely said that there has probably never been a theory or doctrine promulgated on this subject which did not clear away some old rubbish or bring to light some of the relations of the phenomena it presumed to elucidate. And so by slow and gradual steps have all these thousand theories brought to view little by little a great deal of truth.

Like many other things which are at once obvious to the senses and which almost any one can perceive the existence of, fever does not admit of a strict definition, since there is not a single symptom which is invariably present, and which can

be regarded as absolutely essential to its existence.

It is said that Boerhaave once took the trouble to collect all the symptoms which had been observed in fevers; he then struck from his list all those symptoms which are not constant in all forms of fever, retaining only those admitted by himself and many other authors to be common to all. The result was, that only three symptoms, were found remaining, namely, quick and frequent pulse, preternatural heat of the skin, and sense of cold, or chilliness in the beginning. He might have gone farther and struck from his list even these, for it is very well ascertained that fever does occur, without these symptoms; the sense of chilliness in the initial stage being the most constant symptom.

Notwithstanding the difficulty of giving a strictly correct and scientific definition of fever, yet the train of phenomena which this condition of disease presents under all its modifications, offers upon the whole a character sufficiently distinct and definite, for easy and certain recognition.

Fevers, are generally divided at the present day by Pathologists, according to their development, into Idiopathic or essential, and Symptomatic.

By the first are meant all those which seem to be spontaneous, and as far as We are capable of judging are not referable to any appreciable cause. The principal of these are, first. Typhoid fever (this fever "Says Dr. Power" par excellence" of the present day) Typhus, Intermitting, Remitting and

Yellow.

Those who admit the existence of such fevers, suppose that the remote ferrific cause produces a deleterious effect upon the sentient extremities of the part upon which it acts, which deranging function after function according to the sensation of the organic sympathies, finally results in general disease, characterised by the general phenomena of fever; or, as they presume, the remote cause may gradually change the healthy character of the circulating blood, which acting as a morbific irritant on the heart and arteries gives rise to febrile reaction. It is contended by many, on the other hand that such fevers cannot exist, and that all febrile excitement is purely symptomatic, and dependent of course upon some pre-established cause, the one (Essential) symptomatic of a general and the other of a local condition.

Broussais taught an exclusive sympto-
matic doctrine, referring everything to a pre-
established local inflammation (which he
placed in the gastro-intestinal mucous
membrane) and that every irritation
which is capable of producing a percep-
tion in the brain, passes back by the
nerves to be repeated in the mucous mem-
branes of the stomach and duodenum.
Thus if a person be inoculated with the
poison of small-pox virus, the irritation
of the primary pustule or the inoculated
point is conveyed to the brain whence
it is reflected by the nerves upon the
mucous membranes of the alimentary
canal where it establishes an inflam-
mation. The intestinal inflammation
constituting the essential cause of the
eruptive fever, and the eruption itself
is only a metastatic disorder of the cu-
taneous system. This assumption "that

"every irritation which is capable of producing a perception in the brain, is reflected by this organ. To be repeated in the mucous membrane of the alimentary canal" forms the main principle in the Broussian doctrine of the etiology of fever. It is now generally thought that Broussais has not only erred in forming an exclusive doctrine (which pushed to the extreme is contrary to the philosophy of Medicine) but also in the theory of that doctrine; for it is well known now in contradiction to him, that the lesions that we find in the essential fevers (upon which he based his doctrine) are the modes that nature takes to eliminate the poison which produces them and bring about a healthy condition. The lesion does not produce the fever, nor the fever

the lesion, they are both dependent on the same cause, namely the altered condition of the blood, the lesion being the change which the elimination of the poison produces, and the fever the evidence of general disturbance, which the poison in the blood causes. That fever is a very common result of local inflamation is so well known that it need only to be stated. But to refer all fevers to this local inflammation, which happens to be present very often as a result and which he calls gastro-duodenitis, is as far from truth as it is injurious to practice. Broussais notwithstanding this great mistake with which he misled nearly the whole profession for a time, was undoubtedly one of the most enlightened and ingenious pathologists of his day and one who has conferred great benefit

upon the profession.

The most ingenious and plausible theory of the modus operandi of the causes of fever which has come under my observation is that of Liebig and which is very much akin to the notions held by old Hippocrates himself, which were the result of bold unproven speculation, and it is most curious to see these very doctrines which had sunk into universal discredit and contempt, now again assuming their places as scientific truths upon the secure basis of organic chemistry.

Nearly all disorders were attributed by the ancients to a fermentation of the animal fluids. The cause of fever according to Hippocrates was some morbid matter in the blood. This by a process of concoction was brought in

a certain number of days, into a condition in which it was ready to be eliminated from the system. It was then thrown off by hemorrhage, by the skin, or by the bowels, or deposited upon the surface in the form of abscesses or cutaneous eruptions and these eruptions or evacuations constituted the crisis of the disease.

The doctrine thus enunciated by the father of physic is very nearly the same taught by Liebig in the nineteenth century. This distinguished chemist ascribes the phenomena which succeed the introduction of certain animal poisons into the blood, to a process exactly resembling fermentation. Fermentation is excited by the brewer, by adding to his sweetwort a small quantity of yeast. Wort is an infusion of malt and contains sugar and gluten with

with other vegetable matters in solution
Yeast is putrifying gluten, and its com-
-ponent particles are therefore in a
state of intestine motion or trans-
-position. When placed in contact
with sugar in solution, it has the
property of communicating the same
intestine motion to the elements of
the sugar whereby they arrange themselves
into new and simple forms, namely
into alcohol and carbonic acid. If
there were no gluten in the wort, this
would be the whole process, during which
the added yeast disappears. But the
decomposition or fermentation of the
sugar reacts upon the gluten in the
wort and converts it gradually into yeast
which mingling with the liberated
carbonic acid, rises and floats upon
the surface of the fermenting liquid.
So that when the process is completed

there has been produced thirty times as much yeast as was originally added to the wort.

Now this is but a type of what happens to the fluids under analogous circumstances; and it may be laid down as an abstract principle in Liebig's, or rather his translator's words, that a substance in the act of decomposition added to a a mixed fluid in which its constituents are contained, can reproduce itself in that fluid, exactly in the same manner that new yeast is produced, when yeast is added to liquid in which gluten is contained.

Thus the virus of small-pox (which virus is found out of the body) causes such a change in the blood as gives rise to a reproduction of the poison from the constituents of that fluid, and while this process is going on, the

natural working of the animal econ-
-omy is disturbed, and the person is ill.
The transformation is not arrested until
all the particles of the blood which
are susceptible of the decomposition,
have undergone the metamorphosis.
Liebig shows that similar processes
may take place in mixed fluids,
and therefore in the blood, without the
regeneration of added substances. Thus is
disease of a contagious character prop-
-agated; and thus are diseases not carried
on in the same way, not contagious.
For instance, those fevers produced by
animal poisons, as Typhoid fever, cor-
-respond to the former, and those pro-
-duced by miasm, as intermittent,
correspond to the latter. In order that
a specific animal poison should effect
its own reproduction in the blood and
excite the commotion in the system,

which results in the formation, and expulsion of the new virus; it is requisite that a certain ingredient (analogous to the gluten in the brewers sweetwort) should be present in the blood, and this ingredient must have a certain relation to the given poison. This theory of Liebigs like all his others, seems fair and reasonable, viewed in every possible way and is most probably the true one. The light supplied by it gives distinctness to our conceptions respecting certain deviations, from the regular course and type of these diseases, which deviations are not uncommon.

This name of Idiopathic or essential fever is used by a large majority of the profession without having a clear notion of its meaning in its strictest sense, nor is it more than a scientific expression for ignorance. (It is very certain that these

that these fevers have some cause, as there is no effect without a cause; and that the phenomena of fever in this case is primary to any local cause, all the advocates of this doctrine admit. But what the ultimate producing cause, and by what means the effects are accomplished of this (so-called-for-want-of-a better-name) Idiopathic fever, we do not, and perhaps never will know anything about. They must receive some general name by which they may be spoken of, and for this purpose their present appellation, is as useful and appropriate as any other; and until it is admitted by everyone, that all fevers are symptomatic (which I trust to be not far distant) this name must serve the purpose it has heretofore done.

I cannot refrain from here mentioning, and deploring, the sad confusion which now reigns over our medical

nomenclature, which gives rise to so much misunderstanding, and retards to so great an extent the progress of Medical Science; and the worst of it is, that it cannot be altered or remedied without making confusion doubly confounded, and so must be let alone.

The other part of the division of fevers, the Symptomatic, embraces, or is in some way connected with "all the ills that flesh is heir to." beginning at the simplest ephemeral fever, and going through ~~all~~ the enormous list of all that can be so called.

These last mentioned evidently depend upon some local or appreciable cause, act by giving rise, first, to nervous irritation, and through this upon the heart, which being stimulated to increased action, increases the rapidity of the circulation, respiration

and oxidation, of course producing an extra amount of heat, all which deviations from healthy action if permitted to continue a sufficient length of time, show their effects through the fluids upon the solids, by the derangement of all the functions of secretion and excretion. Waste of tissue takes place more rapidly than reparation, and thus the patient grows weak and emaciated. The balance between assimilation and elimination is upset, and now every thing goes wrong. The patient feels chilly from the morbid sensibility of the cutaneous nerves and from the congestion of the internal organs, which of course deprives the surface of the of its proper share for oxygination of the tissues, and heat. He has a general feeling of mal-aise and want of energy loss of appetite

and often nausea. From this came mor-
-bid sensibility and irritability of the nerves
of the stomach; also diarrhoea or constipation.
The urine is scanty and high colored; now
uric acid being the result of the decomposi-
-sition of tissues (and as this decomposition
goes on faster during fever than under
other circumstances) there is a greater
proportion of it in the urine, this gives
rise to the high color, and it is scanty
because so much that should have been
excreted by the kidneys, is passed off by
the skin; except the eruptive fevers, in
which it cannot be passed off by the
skin, therefore must be passed off
by the kidneys. The alteration in the appear-
-ance of the tongue, which has for so
long a time been looked upon, as a
symptom of very great importance, is
now thought but as secondary, and only
indicative of a certain disturbed con-

-dition of the stomach and its amount.
There are many other symptoms which
may occur in symptomatic fever, but
they are far too many to enumerate.
Those I have mentioned which are pretty
constant in all, from simple ephemeral
fever, to grave inflammatory.
The discoveries of Pathologists, in regard
to the condition of the blood in different
diseases, has thrown much light upon
this subject of fevers, and must not
be passed over, without saying a
few words, in regard to its connection
with our subject. They found from
extensive, and careful examinations,
that in all diseases consisting of common
open, frank inflammation, in any
of the organs, or complicated with such
inflammation, the relative quantity and
proportion of fibrine in the blood is
increased, while in diseases of an oppo

-site character, and under opposite circumstances, in the exenthemata for instances, the fibrine nearly maintains its natural proportion, or is diminished in quantity.

It has been stated very lately by some French writers that Fibrine, and Albumen, are one and the same thing, only existing under different circumstances, and one of them has even succeeded in making fibrine from albumen.

Now if this be true (as it is very likely to be) why may not the heat (which coagulates albumen) and which accompanies other inflammation or fever, coagulate the albumen of the blood, and thus give rise to the increase of fibrine, so constant under these circumstances. Dr. Stevens has tried to establish also, that the salts of the blood are diminished in Idiopathic fevers.

But Dr. Tuck, has refuted this state-
ment, by proving that this condition
is owing to the seasons, and not to
any particular condition of disease.
All the circumstances which accom-
pany febrile disease, are of course
modified by the predisposition and
idiosyncracy of each particular pa-
tient which may be either natural,
accidental or hereditary.
As the human system is continually
under the influence of causes which
have a tendency to interrupt and
terminate its actions, life would be
but ephemeral in its duration, and
harrassed by constant disease if the
animal organism were not endowed
with the inherent power of resisting,
to a degree, the influence of injurious
causes. It is by the aid of this vital
resistance, that man is enabled to

live through a long series of years, amidst a multiplicity of causes which conspire unceasingly to his destruction. In relation to the degree in which this power of resisting injurious influences is possessed by different individuals, there exists great diversity; and hence the various degrees of constitutional or natural predisposition to fever, which obtain, among different individuals. Thus the prick of a needle, will, in one man, cause great pain and constitutional irritation; in another syncope, in a third convulsions or tetanus; and in a fourth scarcely any perceptible consequences. We must also add the peculiar influence of location, and the diseases endemic those which happen to be epidemic and those which are contagious. There exists another cause, for the modification of disease, which claims

some notice, and that is, the change which seems to have taken place in the constitutions of the more civilized part of the human family within the present century.
We are told by the oldest physicians that disease is not what it was in times of yore, and there are numerous facts which would seem to support their statements. This change it is most probable is owing to the alterations in the habits of the people, and We observe it to hold an exact proportion to the advance of civilization.
Almost every disease now-adays, and particularly those called fevers, have a general tendency to complication with nervous disorders. And there are a new class of dis-

-cases of a purely nervous character, which were not known or dreamt of in olden times; neuralgia for instance and the low adynamic forms of fever. It is very plain that all these circumstances, as well as those We have already detailed, have a very powerful influence, in the modi-fication of disease, and its treatment; and require to be carefully observed in every case.

Having gone thus far in the dis-cussion of "fevers" I cannot close before saying a few words in re-gard to the proper division of these diseases so erroneously termed fevers.

It has been denied of late years that there is, properly speaking, any such disease as that which has always been, and which is still

expressed by the term, fever.
The word "fever" when used as it commonly is, to designate a disease, has no intelligible signification; it is wholly a creation of the fancy, the offspring of a false generalization, and of a spurious philosophy. The most proper and easiest mode of dealing with these fevers - as they are called, - would be, if it were possible - to discard the name, and the idea, of its ever being a separate and independent disease, and establish at once, that it is in all cases, but a symptom, like any other, for it seems to me, that it would be just as rational to call those diseases in which fever is so constant, - as to give rise to the name (fever) by the appellation of any other symptom as frequently present. And indeed it may even be said, that in a great many cases, the fever is but

a symptom of secondary importance in regard to the discomfort of the patient, or the prognosis of the case. For instance in Typhoid, We often find the febrile symptoms but secondary in degree, and in many cases when our patient is far from safe there is none whatever: but is suffering to a much greater amount from the lesions of the intestines, and the consequent disturbance of the functions of the alimentary canal, together with the great prostration so peculiar to this disease - the amount and gravity of which prostration, being frequently determined by the amount of diarrhoea present. In this case particularly, we have an evidence of the vast difference between the disease and the symptoms; standing out in bold relief in the relation of cause

and effect. "For" according to Liebig "since the phenomena of motion in the animal body, are dependent on the change of matter, the increase of the change of matter, in any part, is followed by an increase of all motions. According to the conducting power of the nerves, the available force is carried away by the nerves of involuntary motion alone, or by all the nerves together. Consequently, if in consequence of a diseased transformation of living tissues, a greater amount of force be generated, than is required for the productions of the normal motions, it is seen in the acceleration of all, or some of the involuntary motions, as well as in a higher temperature of the body." This condition is called fever, and as may be very easily seen, is only the effect

and not the cause: the evidence of something else, of the ultimate cause of which We know nothing whatever. It is also evident, that one and the same cause of disease, will produce in the organism, very different effects, according to the period of life; and that a certain amount of disturbance, which produces the condition of fever, in the adult state, may be without influence in childhood or old age.

A cause of disease may, when it is added to the cause of waste, in old age, produce death (annihilate all resistance on the part of the vital force;) while in the adult state it may produce only a disproportion between supply and waste; and in infancy only an equilibrium between supply and waste. (the abstract state

of health.) It is a very well ascertained fact, that in infancy and youth, assimilation goes on much faster than elimination: in adult life the equilibrium is nearly complete, and in old age the scale is weighed down to the opposite side from that of youth, and we have the process of elimination taking place faster than that of assimilation.

Now when any thing occurs to disturb this natural condition of things, we have disease, which is of course modified by the kind and intensity of the primary cause. And all this disturbance is evidenced to us, by the symptoms which make their appearance. Thus if the poison of malaria affect the system, we immediately have this disturbance of the vital phenomena, of all the

functions of the body, and all the peculiar symptoms of disease, produced by this cause. One of the most constant is fever, and from the variety, and intensity, the duration &c. together with the accompanying phenomena - have all the thousand names of malarious fever arisen. Intermittent, Remittent, & Yellow belong to this class, and are, according to the best authority, of the same family, and only modifications of the same diseased condition, and which constitute the largest proportion, of what are termed fevers.

It has of late years, been indirectly established, that as a general rule those fevers (to use the most common name) which are produced by animal poisons, are contagious, as well as

epidemic and endemic; and on the other hand, those which are produced by what is supposed to be vegetable poisons, are not contagious, though they may be epidemic and endemic. This then after all would be the best mode of division, and classification; and it seems to me after examining the subject, to be the only rational mode of division after having discarded the name of fever. We should divide them, then, into diseases, produced by animal, and those by vegetable poisons. Retaining only the old division of symptomatic, to express those febrile conditions which are dependent neither upon animal, nor vegetable poison. Under the head of those produced by animal poisons, We would place, Typhoid, Typhus, and

the eruptive diseases; in the list
of those produced by vegetable poison,
We have, Intermittent, Remittent,
Yellow &c. And in the third di-
vision, We find, resulting from
Pneumonia, any severe injury of
the body, following any surgical
operation &c &c.
Dysentery, which may be truly said,
to be the scourge of armies, has been
ascribed to Malaria, and if owing
to this cause, would of course be
added to the list, under the head
of vegetable poisons. It has also
been called a simple inflammation
and the fever attendant upon it a
symptomatic one. But it is by
no means certain, and being denied
by many, it is a question yet too
unsettled, to admit of any decision,
in regard to its position in the -

arrangement we have made. In course of time as medicine continues to improve, it is not unlikely, that these will be the three grand divisions, into which all diseases from the least to the most grave will be divided.
One after the other, as the pro-ducing cause of each mysterious disease is understood, will they be placed, under these three great head.
It would require more time, and space than I can command, to enter into the details of each class and its sub-divisions, and hoping that what I have written may in some way convey what I have tried to express, I must close this short dissertation.

An

Inaugural Dissertation

on

Acute Pleuritis

Submitted to the examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Fred^k^ Safsern

of Prince Georges County

Maryland

Introduction — The component parts of organized tissue are all liable to continual decay, even whilst performing most actively the functions of life. The result of this decay, or decomposition, is the generation of Carbonic Acid, a substance the deleterious effects of which, on vitality, are more certainly fatal, than any other known cause. Hence all living Beings are provided with an apparatus for conveying this acid from the System. In Man & the higher order of animals, the Lungs are the organs that serve this purpose. The Carbonic acid produced in various parts of the body, is taken up by the veins, which are essentially the absorbent vessels, and by means of their numerous ramifications carried in the immediate vicinity of the air vesicles. Here by the law of endosmosis, the Oxygen of the Atmosphere, passes through the thin mem-

brane, that lines the vesicle, mingles with the blood, a chemical change takes place, and the Carbonic Acid by exosmosis passes out, and is expelled from the lungs, during expiration in the form of Gas. In order that the vital functions be well performed, and a state of perfect health enjoyed, it is necessary that this process be continually and perfectly carried on. No sooner is an impediment offered, than the whole venous system becomes engorged with this blood containing Carbonic acid. The fluid of the Arteries, on the contrary is scanty, and has mingled with it, a portion of that from the veins, unaltered in its constituents. As soon as this then is transmitted, by the contractions of the heart to the brain, the offices of that organ are instantly disturbed, consequently the actions of every part of the body are altered, and unless the cause be removed, death will be

the inevitable consequence - Thus do we see of how much importance to life, is a healthy performance of the functions of the Lungs. The Pleurae, are the serous membranes that envelope them - They maintain also their structure, and afford a vehicle, by which all their important movements are performed. The lungs could no more execute the effectual functions of the economy, consigned to them, without the Pleurae, than could the Fetus in Utero be developed, and safely expelled from the Mother, without its proper covering the Chorion & Amnion - They are inseparably connected, and whatever affects one considerably concerns the other - Hence Pleuritis, which is the most disastrous, as well as the most frequent agent of disturbance to the Pleurae, becomes a highly important disease, for our consideration. It is derived from the Greek word ΠΛΕΥΡΑ, the membrane that covers the Lungs, and internal sur-

face of the ribs, and signifies inflamation of it - This Inflamation may affect a small portion only of one Pleura, or the entire membrane, and even sometimes both at the same time - The latter event is however rare (Says Dr Wood) only where the desease is associated with Phisis - It may also be combined with various other deseases, as for instance, Pneumonia, Billious Fever, Typhoid Fever, &c, whence it gets respectively the names of Pleuro-Pneumonia, Billious Pleurisy &c - To treat all of them complications, under one general description would be a task difficult & arduous - In fact it would be next to an impossibility - To define and describe each one seperately would require more time, than we are willing to spare, therefore we shall in our remarks confine ourselves chiefly to the simple & uncomplicated form of the desease, such as frequently occurs, and over which the skill of the Physician exercises greatest power-

Anatomical Characters- The first effects of inflamation on the membranes of which we are speaking is a change of their texture and secretion- The Pleura becomes dryer and redder than natural- The dryness caused by a diminished secretion of serum- ~~The redness~~- The redness by injection of blood into the minute subserous cellular vessels- This condition remains, but for a short time- Laennec denies that the secretion is ever checked and asserts on the contrary, that it begins to be augmented from the very inception of the disease, and proceeds pari passu in its course with it- Whether Laennec be right or not, it is impossible to ascertain positively, since patients never die at so early a stage of the disease- The weight of authority and analogy from inflamation of other serous tunics would lead us to think differently- But

however this may be, it is very certain that a few days only is required to increase the secretion in quantity, and alter it in quality - The quantity of fluid varies exceedingly in different cases; sometimes amounting to only an ounce or two, causing scarcely any appreciable inconvenience; at other times extending to a gallon, or more - Professor Smith exhibited to the class last winter a large stone pitcher containing at least a gallon of serum which he had taken from a Thorax at one time, and it is rational to believe that some was left behind -
When the effusion reaches its maximum or approaches even in its neighbourhood, the inconveniences of the Patient become numerous and afflicting - As the discharge of fluid is in one Pleura or the other we have the following results - The lung is closely pressed by the side of the spi-

nal column in the vicinity of its root, and rendered incapable of performing its functions. The Heart is pushed from from its natural position, either farther over to the left, or what is more common to the right side, where it may be seen, heard, and felt, distinctly to beat. We have had two cases in the Baltimore Infirmary, during the present year, where this was unquestionably the case. The Diaphragm is pushed down, rendering its upper surface horizontal, or nearly so, consequently the cavity of the abdomen is lessened, and its viscera, the liver, Spleen &c pressed downwards from their respective localities. The intercostal muscles and integument are bulged out from the intercostal spaces. In fine instead of that beautiful adaptation of parts to their proper places, and proper functions so characteristic in the human frame,

when in health and activity, we have every thing confused, and so utterly deranged, that life becomes almost insupportable, and a burden merely to the unhappy victim.

The character of the exhalations differs equally as much, as does the quantity. The effusion may be simply pure, and transparent serum, or what is more likely be mixed with flocculi of coagulable lymph. This lymph remains but a short time in the chest, before it becomes organized, and attaches itself entirely, or in patches over the surface of the Pleura. These patches tightly agglutinated to the membrane, gave rise to the mistake, so frequently made by old Pathologists, that the Pleura was thickened in Pleurisy. Such is not the case, for the lymph with-case may be peeled off, leaving the Pleura as before the disease began. The

the effusion is not sufficient to prevent the costal and pulmonary membrane, becomeing with this plastic material from coming in contact, we have adhesions taking place. This is rather benificial, than otherwise since it puts a stop to the accumulation of fluid. Again the exhalation may consist of a greenish fluid made up of serum and pus in variable proportions. Or of unmixed pus, resembling the matter of a phlegmonous abscess. Or it may be of pure blood, or the ordinary serum mixed with that fluid. Lastly Andral mentions, in the second volume of his Clinique Medicale, a case in which the fluid resembled the jelly of meat. We have now mentioned all the principal lesions that are ever met with in Pleuritis, and shall proceed next with the symptoms—

General Symptoms — The disease for the most part, like other inflamations ~~as for the most part~~, is first ushered in with a slight rigor — This in a short time is followed by the following symptoms — 1st Pain in the side — The characteristic features of the pain are sharpness, resembling the stab of a dagger, intensity, and a tendency to exibit itself in a small circumscribed space — This space is genera lly about two inches below the nipple, no matter how extensive may be the inflamation — Why the pain should occupy by preference this region is far from being understood — Physiologists have produced many theories, but none plausible enough to be believed, or related — Pressure on the affected side increases the pain, as does also the act of coughing, and inspiration —

2nd Dyspnoea — This is a constant symptom

of Pleuritis, beginning from its very inception, and continuing to its close - It depends however upon different causes during the progress of the disease - Ins the beginning of Pleurisy, the respiration is short, hurried, and jerky, owing to the increased pain a full inspiration would cause - Nature seems aware of the evil and hence avoids it - Afterwards the dyspnoea is caused by compression of the lung from the effused fluid, and becomes much more serious - It will be in proportion to the rapidity with which the accumulation has taken places, and the health of the opposite lung - When the effusion takes place slowly, the system has time to accommodate itself to the difficulty produced, and the inconvenience of morbid respiration is far less felt -

3rd Cough - This is a symptom of little consequence and is often wanting, or so

slight, as to attract the attention of neither patient, nor Physician - When it does occur it is dry and short, unless the disease is accompanied by Bronchitis -

4th Fever - From the nature of Pleurisies we would expect this to be of a highly inflamatory Type - Such is generally but not always the case - When the disorder prevails as an epidemic, we have it of a Typhoid character -

5th The Decubitus - Observers differ widely as to what is the position of the patient in bed during Pleurisy - Some assert that it is upon the sound side, Others say directly the contrary - Dr Watson affirms the dispute to be an exact counterpart of the celebrated quarrel, which took place about the colour of the Chameleon; they all are right, and all are wrong - The Decubitus he thinks changes during the disease - Before the effusion has taken place

when the Inflamation is acute, and the pain severe, the patient lies on the sound side, for fear of agravating his suffering by pressure. When the cavity of the Pleurea becomes filled with a liquid, to lie upon the sound side, would cause great difficulty of breathing, from the pressure exerted by the fluid on the healthy lung, hence the patient, will now change his position and the Decubitus will be on the affected side. In a severe attack of Pleuritis, which we suffered ourselves, about two years ago, we found this to be strictly the case, with more confidence, therefore do we adopt the opinion of Dr Watson. We have now finished the general symptoms. Of all of them, there is not one pathognomonic, yet when they appear together, the diagnosis is rendered nearly certain. We have other signs, far more to be relied on than the above symptoms, and shall proceed next to

speak of them -

Physical Signs — At the outset of the disease, before any effusion, has occured, and when the pain is acute, we have nothing displayed of much consequence - Owing to the pain, and imperfect expansion of the lung, the healthy vesicular murmur is slightly lessened on the affected side, while on the opposite we have it increased, resembling that of children, hence called puerile - At this stage, from the dryness of the surfaces of the Pleura, and injected condition of the blood vessels we have also what is called the friction sound - This is however most commonly the result of irregular and roughened portions of false membrane rubbing against each other during respiration - The sound is variable, and sometimes does not occur at all - When the exhalation of fluid begins to take

place, we have dulness on percussion.
The fluid may be made to vary its position, by the movements of the patients body, and as the dulness is a result of the fluid, it of course will vary likewise. It differs from the dulness of Pneumonia in that respect In Pneumonia we find it fixed and constant, also preceded by fine Crepitation. Besides this circumstance the history of the diseases will aid us in distinguishing between flatness, as it is found in the one, or the other. In Pleurisy the accumulation of fluid begins in a very short time, from the inception of the inflammation, and proceeds most rapidly, until often the entire cavity of one Pleura is filled. The dulness will go on pari passu, with the accumulations, and cover one entire side of the Thorax, in two or three days. In Pneu-

mover on the contrary perfect dulness is never apparent, for several days, and will scarcely ever extend over the whole lung. We have said that the dulness may be made to shift its place in Pleurisies by the movements of the patient. This is not however always the case. Adhesions existing between the costal and pulmonary Pleura will sometimes, even often prevent. Besides the dulness consequent upon the exhalation of fluid, we have also other signs produced by the same cause. The vesicular murmur, which was lessened, from imperfect expansion of the lung, has now become still more so, and in proportion, as the fluid increases, it goes on to faint away, until it is lost entirely. The pulmonary tissue is at this stage closely, and completely compressed around the Bronchi, and prevents the air from entering the vesicles.

As a consequence of this we have Bronchial voice, and Bronchial respiration - they differ however from the same, as heard in Pneumonia, for they are modified by the natures of the substance through which they pass - This difference is sometimes so slight, as not to be appreciated, and it is impossible to say, by merely listening whether we have Pleuritis or not - At other times when the stratum of fluid, through which the voice passes, is suitable, we have it entirely different, and easily recognised - The voice in this case is still bronchial, but it has superadded to it modifications - It is "trembling, quivering, thrilling, and discordant," resembling according to Laennec the bleating of a Goat, and from this fact has acquired the technical appellation of Aegophony - When this sound is heard we may feel certain that Pleuritis exists -

But when there is no Aegophony, how are we to ascertain, whether the Bronchophony is a result of Pleurisy, or Pneumonia, There is one circumstance, which will render the Diagnosis clear and certain. In a state of health if the hand be placed over the lung, and the person be made to speak, there will be communicated to it, a thrilling, vibratory sensation, called technically the vocal Fremitus. If the lung be condensed by Pneumonia, we have this vibratory sensation still or more apparent but if on the contrary the cavity of the Pleura be filled with fluid, this sensation is entirely lost, and no communication whatever is felt by the hand. Thus may the Bronchophony of Pleuritis be readily distinguished from that of Pneumonia Dr Stokes regards this sign of far more value than Aegophony. The best place to examine for it, is under the Scapulae-

Besides the physical signs we have now treated of, there are others, such as enlargement of affected side, displacement of thoracic viscera, bulging of intercostals &c, all of which, we spoke of under Anatomical lesions, and it will be unnecessary to repeat here -

The Course of Pleurisy, like that of most other diseases, is exceedingly uncertain and variable - If taken at the beginning with the lancet and a purgative, it may be arrested at the very threshold; even should it have progressed so far, that a slight effusion of lymph has been deposited, if properly managed the disease may be cured in four, or five days - But if serum be poured out to such an extent as to cause dulness, Aegophony, or bronchophony, the symptoms can not be eradicated for some time, and a perfect restoration need not be looked for, before the eighth

or tenth day. When dulness pervades the whole of one side, when Aegophony has been once heard, ~~but~~ and again disappeared, in consequence of too much effusion, when the vocal Fremitus is completely wanting, and the affected side enlarged, the disease most commonly has run, or will run into the chronic form, and recovery becomes very doubtful. Should the patient ever be so fortunate as to get well, weeks, yea months will have elapsed. What we have said with regard to the course of Pleurisy is liable to many and variable changes — No two cases will ever progress alike, or terminate alike, and hence it is impossible to give an accurate account of its course. The above must be looked upon simply as an approximation of what takes place in acute Pleurisies. Of chronic Pleurisy, Emphysema, Pneumatho-

ray &c. we have not pretended to speak-

Causes - These may be divided into predisposing and exciting - Among the former may be ranked, congenital malformation, consisting of narrowness of chest; a sanguine temperament; irritability of system, weakened health from previous disease, convalescence from fever, and the puerperal state - The most common exciting causes, are cold and dampness, hence we find Pleuritis occuring most frequently in winter and Spring, in low and damp situations in men than in women, as the former are more exposed to the inclemencies of the weather, in boys than in Girls, for the same reason - We have other diseases often the exciting causes of Pleurisy Indeed Pneumonia, by extension of inflamation so often induces it, that it was for a long time believed that they could

not exist independent of each other. Arrested cutaneous eruption, or Metastasis of Gout or Rheumatism, are sometimes causes, also tubercles may produce it, either by irritating the Pleura, when in direct contact with it, or by ulcerating through the substance of the lung, its matter being thus suffered to fall into the cavity of the Pleura, and thereby setting up inflamation. The remaining causes yet to be mentioned are mechanical injuries such as contusions, penetrating wounds, either by cutting instruments, or by sharp Spicula of fractured ribs, inflamation, ulceration, and abscesses of the walls of the chest, also cancerous, and other malignant diseases of the same parts—

Diagnosis — Until within a very late period in the history of Medicine, since Laennec made his most brilliant discoveries in auscultation, it was impossible to distinguish with any certainty any Thoracic disease from

another. It is a well known fact that the general symptoms peculiar to Pneumonia, are many of them, sometimes all met with in the other cases. So great a man as Cullen used the following language "Under the title of Pneumonic inflamation I mean to comprehend the whole of the inflamations affecting either the viscera of the Thorax, or the membrane lining the interior surface of that cavity, for neither do our diagnostics serve to ascertain exactly the seat of the diffrence in the seat of the
deseases, nor does the seat of the deseases exibit any considerable variation in the state of the symtoms, nor lead to any difference in the method of cure." How very inaccurate, and ridiculous, would such a statement be, if it were made, under our present mode of investigating these deseases. No class of malidies are now better understood than those of the Chest, and the diagnosis of Pleurisy to one acquainted with aus-

cultation is clear, and easily made - The diseases which it mostly resembles are Pneumonia, Pleurodynia, and Pericarditis - From the former it may be known, first, by the character of the pain, which is more acute in Pleurisy, and for the most part confined to one spot, generally below the nipple - Secondly the Sputa differs - In the disease of which we are speaking, we find it simply mucous, and transparent or slightly streaked with blood - In Pneumonia on the contrary it is perfectly characteristic of that disease, being viscid, and rust coloured - Often however Pneumonia exists for some time without the rusty Sputa, and is accompanied by so much inflamation of the pleura, as to render the pain very severe - Thus we are unable, from either of the above symptoms to form a correct opinion, as to our diagnosis - The Physical signs point out the sure land marks - And what are they?

1st - We have dulness occuring sooner in

Pleuritis, we have it also in the latter stage more perfectly flat, we have it displaying itself in the most dependent parts of the Thorax, and varying with the motions of the patient. We may have it in Pleurisy extending over the whole surface of the Sternum. Hepatisation can render only one half of it dull. Again we have two signs that are never heard in Pneumonia, Aegophony, and the Friction Sound. They are not always present, but when so, are perfectly pathognomonic. In Pneumonia we have the crepitant rale of pulmonary inflamation; never any such sound in Pleurisy. The hand placed over a hepatised lung, feels the vocal vibration distinctly and preternaturally increased; over pleuritic effusion it is entirely wanting, and this fact is one of the surest diagnostic marks. Lastly, we have enlargement of side, bulging of intercostals, displacement of vis-

ara &c, which in Pneumonia nothing will ever give rese to - From Pleurodynia this desease may be known by the absence of all the physical signs in that affection, except perhaps slight diminution of the respiratory murmur - From the character of the pain, which has a tendency to shift its position in Pleurodynia, and the cough and fever which are not half so alarming - Pericarditis is distinguished from inflamation of the Pleura, by the more precise outline and position of the dulness, its not changing with the motions of the patient, the situation of the friction sounds, the altered condition of the cardiac sounds, and the absence of Regophony.

Prognosis - This will, or should depend greatly upon the amount of the inflamation, the cause of the desease, and the persons in whom it occurs - Simple Pleurisy of one lung, unaccompanied by any other desease

if properly treated, will nearly always terminate favourably - If on the contrary the disease attacks both membranes, or one over its entire surface, the result will be exceedingly doubtful - Again when the disease depends upon tubercles, or gangrene of the lung, it is always fatal - The quantity, and nature of the effusion, and the time it has existed should always be deliberately considered in forming our Prognosis - If it be of pus, and has remained so long as to bring on Typhoid symptoms, we may always apprehend a fatal termination - The young suffer less with Pleurisy than the old, from the tendency of the former to the effusion of coagulable lymph, and consequently adhesions - In the old, according to Dr Wood, there is a disposition to the secretion of serum and pus, both of which greatly interfere with the curative process -

Treatment— Few diseases bear bloodletting better than the one under consideration, and few, or none exhibit better its salutary effects, hence the first thing we should think of, after we have made our diagnosis is the lancet— The patient should be placed in the erect position and bled to syncope, or nearly so— He should then have given to him a good Mercurial cathartic, and directed to follow it in four or five hours with Senna & Salts, or some other brisk aperient— We should direct at the same time (says McIntosh) Calomel and Opium, in minute doses to be given several times a day— Dr Wood recommends the neutral Mixture, with small doses of Tart. Emet, through the day, and Calomel, Opium, and Ipecac, of one grain each at night, not unless however the pain be so great, as to prevent

sleep - We incline decidedly in favour of the position Mercurial treatment of Dr Watson - Mercury is especially useful to prevent the effusion of coagulable lymph - Upon our second visit should the pain still continue severe, and the fever high, it will again be necessary to bleed, or apply cups or leaches over the affected side - These should be followed by an emollient poultice - Hops or bran meal makes a very good one Great care should be taken that the cold air does not reach the moistened skin - Should the above means not prove adequate to subdue the disease (they often will however) great advantage will be found from placing a large blister over the Thorax - This means should never be dispensed with, should the symptoms continue after proper depletion - At the end of the fifth or sixth

day, if the effusion be considerable and no indication of improvement, it will be essentially necessary to touch the gumbs of the patient, if this has not already been done, with some one of the preparations of Mercury - Calomel, or Blue Mass, if the Stomach, or bowels be irritable is the best - Sometimes the fever will abate, indeed entirely leave the patient, and he will be able to leave his bed, and walk about the room, and yet the cavity of his pleura will be nearly filled with liquid effusion When such is the case we must resort to diuretics, aiding them with continued blisters - Calomel in small doses, combined with Pil. Pot. may be given, or cream of tartar, or Squill, or Digitalis, if the pulse does not contra-indicate - Should there be cough, infusion of Senaka, will be found very use-

ful - Colchicum, and the Iodide of Pot, have also been used with some advantage, according to some authorities - But in spite of every effort we can make use of; and the best medical skill, the progress of the effusion will sometimes obstinately continue, until the bag of the Pleura becomes so much distended, as to displace the Thoracic viscera, and compress so much the opposite lung, as to give rise to alarming symptoms of dyspnea - Under such circumstances the operation of Paracentesis should be at once performed - We shall not describe the operation, as acute Pleurisy is the subject of our remarks and it seldom, or never requires it - The diet of the patient in this disease should be of the mildest character - For the first two or three days he should be allowed nothing but

mucilagenous, or farinaceous broths, such as ℞ rice water, infusion of slippery elm, tapioca &c - After the fever has been subdued, he may have a little more substantial diet, using great caution even then as to both the quantity and quality of what he eats. Refreshing acidulated drinks may be allowed freely - His room should be kept very quiet, and moderately and uniformly heated - Great care should be taken that the patient does not get the bed cloathes, thrown off of him during the night and thus expose himself to cold -

We have now concluded our remarks - In them we have simply related facts, that others have discovered, and long since recorded in more beautiful language - We make no pretensions to originality - Our ignorance of all medical subjects, would have deterred us from writing altogether, were it not an

obligatory task, imposed upon us- We hope however and believe that as much has been accomplished, as is expected - In conclusion allow us Gentlemen of the Faculty, to return to you each, and all our sincerest thanks for the kindness, we have ever experienced at your hands- For our election to the Infirmary, for the attention and clinical instruction, we have received, while residing here from Doctors Chew, Power, Smith, Miltinberger, and Thomas we shall never be forgetful - To promote the interest of the University shall always be our aim - To see the Infirmary, our present delightful, and useful abode, grow in size, and increase in popularity will ever be our desire -

Fred'k Sapper

An

Inaugural Dissertation

on

Cynanche Trachealis

Submitted to the Examination

of the

Provost, Regents & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Jas. Thomas

Cynanche Tracheali is an acute and violent inflammation of the mucous membrane of the trachea, it is generally known by the name of Hives or Croup.

It makes its attack principally on infants and is more apt to occur in males than females.

The occurrence of this delicate is very frequent on exposure after it has once affected the constitution although it may have yielded to prompt and vigorous treatment.

The age at which Croup works its greatest evil is chiefly the second year of infancy; from this period, to the tenth year the number of its attacks diminishes.

Out of ninety-one cases mentioned by Jones, there was only one later than the eleventh year.

It does however, though rarely

here upon the constitution at a more advanced age.

Dr. Watson's practice furnished a single case, in the person of a girl, who died of croup at the age of nineteen; again it commenced its ravages at a much earlier period than even the first year.

In one recorded instance it was known to occur during the third week of infancy; but these two examples constitute the extreme limits to the occurrence of croup, and consequently form not the general law of its action but the exceptions.

Pathology of Croup — The mucous membrane first becomes injected, reddened, and swollen, after this has taken place, a free secretion of mucus ensues, and if the patient is not relieved a membranous

Exudation follows from the seat of inflammation; sometimes here and there a few shreds of albumen are thrown out from the inflamed organ; again a membranous exudation of albumen mixed with fibrine traverses the entire length of the respiratory organ commencing at the tonsils and investing the mucous canal to the minute pulmonary vesicles.

This membrane consists of albumen principally, also of fibrine and is of a dense unyielding texture, differing from the false membrane formed out in croup packs in its not being plastic i.e. not having the property of instituting a circulation between it and contiguous surfaces, differing also in the amount of fibrine it contains and in its consistency.

This membrane extends sometimes down the pharynx and stomach also upward into the frontal sinuses and changing its direction, it reaches the conchæ. Sometimes pus is poured out into the small bronchi hermetically sealing up the vesicles of the lungs, and acting like a false membrane checking the function of respiration and threatening the patient with immediate peril. Having located this disease and spoken of its pathology, it will be easy to make out its signs and symptoms and here I would remark that this disease has no pathognomic sign and must be determined rather from the symptoms collectively.

Croup being a violent, inflammatory disease it is natural to expect to find some of the

-phenomena characteristic of acute inflammation, and here we are not disappointed, for there is a flushed countenance, hot skin, thirst, quick, hard, and full pulse — upon these other symptoms supervene — change of voice, Embarrassed respiration, Expectoration: these symptoms increase in gravity until the voice becomes gruff, brassy, like the sound produced by coughing through a brass trumpet ringing cough and ringing Expiration followed by loud crowing inspiration. To these may be added a negative sign absence of dysphagia.; These are the symptoms which mark the presence of this formidable disease. The manner in which croup makes its attack becomes a subject of much importance - inasmuch as the subsequent violence of the-

-disease will be in a manner anticipated — at one time Croup advanced to its height slowly, giving a day or two previous notice to the family of the patient that it is about to commence its march. The patient is affected with the common symptoms of catarrh, at or before midnight, the symptoms of Croup make their appearance; this is one mode of attack, another is marked by no premonitory symptoms; the infant is put to bed well, towards midnight it becomes restless and fretful and in a few hours is laboring under a severe inflammatory attack of croup.

The stages of Croup are more numerous, but may be divided into three, first, the inception of the disease, - in which may be observed flushed countenance, hot skin, accelerated -

-pulse, thirst, and general discomfort, a change in the natural tone of voice and respiration, at this next stage the inflammation had reached its height, and is marked by intense fever, great thirst, quick full and hard pulse, brassy voice, crowing inspiration, livid countenance, showing that the blood is not sufficiently arterialized, owing to, either the formation of a false membrane excluding the air from the spongy texture of the lungs or to a swollen and narrowed condition of the Rima glottidis or to thick, viscid mucus in the small air-tubes choking inspiration and threatening the patient with syncope.

The third is the most formidable of all, a stage in which patients rarely recover, this may be denominated the stage of prostration

-or collapse; the symptoms are
feeble pulse, dusky countenance
, black feet, extreme dyspnoea,
cold extremities, disposition to
coma, the head is generally thrown
back to facilitate the function
of respiration:
If immediate relief be not afford
by the Surgeon during this condition
of extreme peril, the patient must
soon die of suffocation, resulting
from the existence of a false membrane.
So violent a disease as Croup could
not be expected to be of long dura
tion, generally it runs its course
rapidly, terminating favourably
or fatally within five or six days;
sometimes it continues until the
eleventh day or cuts the patient
short within as many hours.
The causes of this disease are
numerous, Cold & dampness from

how are the most general if not
invariable caused; a damp room
lately washed in which the patient
sleeps is a very frequent cause,
this is a common cause in the
families of washer women - damp
clothes, exposure to damp, cold
atmosphere - sudden change in
the atmosphere - heavy rain or
frosts. Again, some localities
appear to abound more in cases
of Croup than others; low situa
tions, damp alleys, situations near
large bodies of water, And again
some Constitutions are more influen
-able than others; thin blooded or
scrofulous conditions become indi
rectly predisposing causes to Croup,
unhealthy food, dentition &c
Diagnosis of Croup.

The difference between
the different Cynanches may be.

ascertained by the combination
of the two symptoms, dysphagia
, and dyspnoea; in Cynanche pharyn-
-gea respiration is free and deglu-
tition difficult; in Cynanche laryn
gea both are difficult; in Cynanch
tracheali respiration alone is dif-
-ficult; in tonsillitis deglutition is
difficult.

In simple croup there is no pain
in the part affected, in diphtheritic
croup there is pain and stiffness
of the muscles of the throat; the
patient's head is thrown back to
keep the false membrane open; also
the third stage of croup is more
frequent in diphtheritic than in the
former, Simple croup.

Prognosis

The recovery of the patient
depends very much upon the time
at which the patient is seen by-

- the physician - if late, after the second stage had commenced it must be unfavorable, if later, still worse, the patient had slight probability of recovery.

But if the patient had been seen in the commencement of the first stage and had been in previous good health, of a good constitution, of no scrofulous diathesis, the disease may be cut short by prompt and vigorous treatment. Sometimes the patient may recover from the second stage or even the third.

In either of the two last stages recovery cannot be more than possible - scarcely probable.

If however a patient be seen by a physician when his face is dusky, skin clammy and cold - pulse feeble and quick - feet black -

- and suddenly on performing tracheotomy, he breathed freely - the false membrane is coughed up either entire or in shreds - Expectoration becomes more free, warmth returns to the skin - the countenance grows less dusky, the patient from the relief afforded, becomes inclined to sleep - You may now time to hope, but nothing more, - a false membrane may be formed within a few hours and carry off the patient.

The period at which the child was seen the length of time elapsed since the inception of the disease would modify prognosis: if the patient on the fifth day began to expectorate, and breathed freely, after having been in the third stage, it would give more encouragement.

If again the attack be slow in its progress commencing with catarrhal symptoms and marching slowly to its height, the probability would be that the false membrane was formed below the larynx and extended down into the bronchi or even farther into the small pulmonary vesicles rendering tracheotomy vain and useless.
If however the attack be ushered in without any premonitory symptoms, the physician might possess infinitely greater prospect of success as in this case the larynx is probably the seat of membranous exudation, rendering the chance of a patients recovery many more when tracheotomy is skillfully performed.
In all cases of Croup the physician should be very careful

- in working out his proposed
& the Chances are equal on both
sides, as many for as against
recovery.
Some year back the death from
Croup were four to one of recovery
Now that it is better understood
, better treated, one in two generally
get well.
Treatment of Croup.
This must con
sist of those remedies usually
employed in acute inflammation -
there is no specific in the treat
ment of this disease.
Bloodletting, Antimony and
Calomel form the most impor
tant remedies - We are not how
ever to omit some other agents
which are though secondary in
consideration to the above men
tioned remedies, are often found

to be of signal advantage.
These are warm bath, tracheotomy,
Ipecacuanha, and blister, also Sulphate
of Copper, Ipecacuanha, expectorant
and stimulant.
The most important agent by far
is bloodletting, but this cannot
be employed under all circum
stances; if the patient be anæmic
or very young, it would be a
question of doubt whether to em
ploy bloodletting, even though
the patient was seen in the
commencement of the first stage.
A small quantity however might
be cautiously taken from a very
young infant.
Should the patient be of a plethoric
habit, when seen early, topical
bleeding would be of great advan
tage, and by the employment of
this means alone, the attack-

might be cut short; But it will be much safer to combine this with the Tartar Emetic treatment - a child one year old will stand the employment of two leeches after the first year, one leech may be added for each succeeding year; the leeches should be applied over the sternum, and not on the neck, as it might be expedient to employ pressure to arrest the bleeding; leeches are preferred to either the lancet or cups, for the reason that what would be topical bleeding in adults and consequently a feeble remedy against acute inflammation would be a very efficient bleeding in a child - and further the use of the lancet in very young children is attended with some difficulty - it is not easy

- to find a vein in the arm from which we can extract blood, they are so well enveloped in adipose tissue: Cups are also objectionable as being unhandy and oppressive to the child: the American leeches are smaller than the European and consequently three or four may be applied to a child a year old. Antimony constitutes the best remedy of greatest value, it should be administered frequently in small doses to produce nausea and sickness, as it then acts as a sedative to the general circulation exerting its influence principally upon the Capillary vessels, and by this means subduing inflammation; the quantity is one grain to warm water ℥i., and this administered cold, in divided doses, a teaspoonful every quarter of an hour.

:- should the frequent administration of this medicine, oppress the powers of life too much, it would be marked by feeble and intermitting pulse, pallid countenance, cold extremities, and all the symptoms of collapse; then it should be omitted for a while, and a little brandy and water given in its stead, or some other stimulant, such as ether or ammonia: If the Antimony should act on the bowels, it would be well to combine it with Syrup of poppies, or a few drops of laudanum; in case the Antimony failed to produce a proper Effect, it would be advisable to administer a few grains of Calomel in conjunction with it or seperately to act on the bowels; two or three grains every three or four hours

until frequent green stools are produced, and in the event of Calomel remaining too long in the bowels without exciting them to action, a teaspoonful of castor oil would be of service.

When the Calomel is employed alone it is generally given to promote the absorption of the albuminous exudation.

Dr. Watson thinks it questionable whether Calomel does have the effect of producing the absorption of fluid or membrane deposited from mucous surfaces; it does evidently produce absorption in serous membrane. Calomel causes free secretion from other organs, and thereby diminishes the fluids in the general circulation and also relieves by this process the organ which is inflamed.

The Expectorant plan of treatment

in Children is always of very lit-
-tle importance, as they generally
swallow the matter which should
be expectorated; in the stead of
these remedies, Emetics are of greater
value: Sulphate of Copper, Antimony,
Ipecacuanha, and sometimes mus-
tard which in extreme cases, pro-
motes the action of the above men-
tioned agents: Sulphate of Copper is
sometimes administered to break up
the false membrane and cause it
to be expectorated during Emesis—
This however can rarely be accom-
plished by any agent— Antimony
may generally be found to answer
every purpose and even more than
any one of Emetics, as it promotes
Emesis and controls inflammation
at the same time.
Warm bath is sometimes among
other agents of much benefit—

- it tend's to promote relaxation of the system, and also to aid Expiration and inspiration as well as to increase Expectoration - If the patient when submitted to this remedy should be placed in water of the temperature 98° Fahrenheit, and allowed to remain there for a few minutes, from two to ten or fifteen minutes; though some advise longer. he should then be wrapped in a blanket & wiped dry, then returned to his bed, taking great care that he did not take fresh cold.
The last resort to be relied on during the violence of this terrific disease, must be tracheotomy; this however I regret to say promised little success: the Child is generally in a State of Apnea when we resort to so dangerous an Expedient; the Operation itself is attended with-

-pent to the patient from a tendency to profuse hemorrhage; and when performed by a most skilful hand, it may avail nothing; the membrane may have extended so far as to exclude air from the spongy texture of the lungs; or this may result from thick, viscid, mucus clogging up the small airtubes sufficiently to choke respiration. Dr Watson, regards tracheotomy as utterly hopeless but for two instances of its successful performance, the one achieved by Mr. Andrè, the other by Mr Chevalier, however the result of the operation as performed by M. Trousseau thirty nine out of one hundred and fifty cases were successful.

An

Inaugural Dissertation

on

Etiology.

Submitted to the Examination of the

Provost,

Regents, and Faculty of Physic

of the

University of Maryland,

for the degree of

Doctor in Medicine.

by

Henry M. Wilson

of

Maryland.

However varied the pleasures of life may be, there still are ills which more than counterbalance them, in the scale of proportion. There breathes not the man, who, while he enjoys free access to the one, can close every avenue to the approach of the other. Who can sip of the goblet, yet stop short of the dregs.

The approach of an Enemy, is under any circumstances, an Event of importance. To the Physician it is doubly important, because he must needs deal with an Enemy, more subtile than those who now "live but in song," as he comes in a more "questionable shape." We have traitors within, as well as about us. Our own passions sit at the Council-board of the mind, and often advise to our ruin. And it requires a heart that is pure, a conscience well-Educated, a will firm in the right, to prevent

us from turning against ourselves.

In the Sick-Chamber, as well as in the battle-field, We should know of the direction of the Enemy's approach, in order the more successfully to defeat him: hence the Wonder that Etiology, which treats of such approach, and Pathology, which treats of the point of his intended attack should have been of such recent discovery: for although Ancient Authors treat of Various diseases, yet of their true nature as We now consider them, their most exalted ideas Were but as glimmering lights. It remained for more Modern Authors, as Cullen, Thomel, Sims and others to give

"_____ to airy Nothing
A local habitation and a name."

Etiology is of the widest Extent. It Embraces Within its range Every leaf whose decay may generate a gas. Every flower whose perfume may be cadened with poison. Every Teaspoon whose handle may be tainted, as well as the more respectable

Causes of Disease. It is evident, that in a Subject of Almost unlimited Extent, Some attempt at classification Must be Made. Almost Every Eminent Pathologist who has Ever written on the Subject has adopted one to Suit himself; Consequently they have all been different. The one which We have Selected Can boast at least, one Element of perfection, Simplicity; and as this is all-important in a Subject the Synopsis of which is alone attempted, We have the less hesitancy in offering it.

I have divided the Subject into the two grand Propositions.

I. The External Causes of Disease.
and this into. A. Common Causes.
B. Mechanical Causes.
C. Chemical Causes.

II. The Internal Causes of Disease.
and this into. A. Common Causes.
B. Mechanical Causes.
C. Chemical Causes.

I. The External Causes of Disease. These are they, which Exist in the World about us. They are intended for the Support of Animal life, but may be so altered or Modified as to cause either Impairment of function, alteration of Structure or death.

A. Common Causes. The Exclamation "We are fearfully and Wonderfully Made", applies with Equal truth to the Relation as well as individual Existence. We are in the World, and to a certain Extent, Must be of it. Our Senses are open to the Perception of things beyond themselves, and may be Variously affected. The Mind is also open, and Constantly Modified by External Circumstances.

If these Remarks are true of the intellectual, Much More so are they, when applied to the Animal Part of our being. When we Consider the intimate Structure of the Human frame; the almost innumerable inlets for the ingress of disease, Coupled with Mans Rashness

and the general want of care, manifested in the preservation of his health. We are not surprised that he is the subject of so many ills.

Nor is the source of his maladies less abundant. Nature teems with her inhabitants, — unseen spirits of the air, which like Banquo's ghost, will not down at a bidding. They sit as syrens at the entrance of every avenue of pleasure, and with fairy fingers beckon us to enter. They are inhaled with our breath; — conceiled in our food: in a word, we find them on every hand, and at step, in the pilgrimage of life.

1. The atmosphere. The air around us may become vitiated by contact with matter in decay, and instead of preserving, is alone fit for the destruction of the body. As the seasons change, the air also changes to a certain degree. In spring we are accustomed to consider it as predisposing to acute inflammations as catarrhs &c. In summer, we have the heated air, giving us malies,

and the Various fluxes. In cool, damp air, So favorable for thoracic diseases. The Winter, in some respects resembles the Spring, in the amount of inflammation to which it predisposes.

The Electrical Condition of the Atmosphere, is a subject which has lately engrossed the attention of the profession. Various have been the Opinions Expressed; Some founded on theories of the Mind, and others on those of the Amount. It has been brought forward to account for almost Every disease, and is in fact, a Convenient Element by which to theorize on Most of the Knotty Questions. We Know that Electricity Exists, and that it Modifies to a certain Extent, the State of the Atmosphere but in What Manner, and to What Extent, We are unable to Say.

An atmosphere Vitiated by Confinement, is a fruitful Source of disease; hence the bad effects of crowded Churches, theatres or halls, on the generality of persons.

Sudden Variations, unconnected With

Changes of Season, are very fruitful Sources. The System is most frequently opened as it were, to the noxious influences of such an alteration, by imprudence in dress. The female, who, to be a Votary at Fashion's Shrine, will change her morning dress of thick shoes, woollen hose and Marino, for paper-soles, silks, and a dress without sleeves, and woefully deficient in the bodice, is certainly not using that amount of Common Sense, which directs the Cat or dog, to seek the glowing comforts of the Winter's hearth.

2. Age. We find Mankind more liable to diseases at one Period of life than at another. The Infant is subject to Croup, from which in Maturer Years it is Exempt. Diseases of dentition occur at this Period, which in after life are changed for some other form. When this Stage has been passed, we have the tubercular diathesis becoming Prominent, followed by the Cancerous cachexia, and its accompanying train of Evils. While in Old age we have the Punished follies of our Youth, Appearing in Rheumatic and other Pains, diseases

of the brain, as Softening; diseases of the urinary apparatus, as incontinence, closing with that strange alteration, from activity to imbecility; from strength of Mind to a shattered Memory or impaired intellect, from the Walk of Manhood, to the tottering Step of Second Infancy.

3. Light. The influence of light upon the Human Constitution is very remarkable. It seems absolutely necessary for its Well development. In the Vegetable World, this influence is as perceptible as upon Man. We know that When a plant is Nourished as an Exotic, and excluded from the Sun's rays, that its petals assume a sickly Color, by no Means approximating the beautiful green of the natural plant. Similar Examples from the Animal World are necessarily scarce, but the few instances that have been recorded go to prove the Almost Specific effect. Caspar Hauser, the boy immured in a cell in Germany, is a good illustration. The same effect may be observed in persons

Confined in dungeons, Mines &c. When Sun-light is shut out.

4. Mode of living. A mans mode of living, and his place of abode, has a great deal to do in the matter of his health or sickness. It does not require the Eye of a very acute observer to notice the difference in Constitution of those children who are raised in the Country, and those in the city. The latter, are, generally speaking puny, when compared with the former. They are particularly subject to Rachitis, Scrofula, and in the Summer Months, diseases of the bowels, caused by the reflected heat, and impure air.

5. Professions. Particular callings, as lead Manufactories, and quicksilver Mines bring with them specific diseases, as will be noticed hereafter. Sedentary professions induce to apoplexy and hemorrhages, — the more active, to Aneurisms &c.

6. Contagion. We are so constituted, that

We are not only affected ourselves, but the faults of our folly or Misfortune can be Visited upon our friends. Of the Exact Nature of Contagion We are unacquainted. It has been supposed to consist in Contact With Morbid Secretions, and again to the march of Animalcula. This latter Opinion, doubtless, is taken from the Contagious Nature of Scabies, in which disease, the living Animal is plainly observed by the Aid of the Microscope. This latter, I Consider to be the most Reasonable hypothesis, though, Whether this influence from the General to the Particular be true, We cannot at present be absolutely Certain.

Be its Nature What it May, Nothing, We Suppose, has Ever been a greater Source of disease, or Entailed greater Misery upon our Race. We have only to look at the march of the Cholera to be Reminded of its Extent. It travelled the Eastern deserts, With Every Caravan, It fell upon Persia, almost as Universally as her Storms

It made the tour of Europe; visiting State after State; Canton after Canton; City after City. Apparently dissatisfied with the extent of its influence, it leaped the Ocean, and passed through our own land, like some demon of destruction sent upon the Earth to establish a reign of misery.

Cholera presents but one feature of Contagion, others might be noticed, had we the time to refer to the characters of Scarletina, Rubeola, Variola, the Plague &c.

7. Miasm. This is a subtile Emanation — a viscious atmosphere, which arises from marshy districts, where water is in contact with vegetable matter in a state of decomposition, + at any Elevated temperature. The nature of Miasm as of Contagion, is unknown, although we have attempted a definition. Its effects, though well known, are ~~Equally unknown~~ are as equally uncertain. Two persons living in the same house; working at the same business, may be taken down together; the one with intermittent,

the other with Remittent fever. This may result from some predisposition, or from the imbibition of a larger quantity of the Morbid Poison, or what is more probably, from both combined. It seems to select for its particular subjects, strangers. The wards of the Baltimore Infirmary, have during the present fall, (1869) been crowded with Irish patients, laboring under the Miasmatic fever. They were mostly from the mine banks near the City, or from the Public Works near Cumberland: both of which places are notorious. Another singular feature in the history of Miasm is, a selection of the seasons of the year as most favorable for its developement. The fall months are preeminently miasmatic.

B. Mechanical Causes. This class embraces all those elements, which by direct and perceptible contact, injure, or tend to injure the human organisms.

1. Blows. These may come from

blunt, as well as cutting instruments, and if by their impinging the skin is not seperated, or does not lose its continuity, still it is so far injured as, in a certain degree, to lose its vitality.

Mechanics, are as a class, more exposed, perhaps to these injuries, than any other class of persons by virtue of their occupation, — being more liable to accidents.

2. Falls. by which bones are fractured or dislocated; muscles contused or ligaments, ruptured.

3. Mode of dressing. This, though not as startling in announcement, as some dire disaster by "flood or fell", yet occupies a conspicuous place in the Etiological category. The sexes must have common points of resemblance. The "pistols and coffee", of the man, has an analogue in the woman's tongue. His "clothes-line", has a delicate substitute in the corset. — An ingenious piece of mechanism, which has been as prolific, perhaps, as any other cause, in the production of misery. The compression caused by tight lacing, compels

her to breathe pneumonically. Her form is disfigured; the motions of her ribs and diaphragm are interfered with, and she presents the appearance of a model 'tis true, but strangely altered from the Grecian Venus.

C. Chemical Causes. These are they which by combining with some of the constituents of the cuticle, destroy the vitative properties, necessary for health.

1. Irritants. Substances which on being applied to a part, cause a morbid accumulation of blood. Such as mustard.

2. Caustics. These are also irritants, but in a much greater degree than the former. The substances comprised in this class, as acids, alkalies &c. act by combining chemically with some one or other of the constituents of the living tissue, causing its destruction. As a general rule, the different substances have an Elective affinity for the Watis, which Enter into the composition of the integument.

II. Internal Causes of Disease. In the very cursory glance which we have taken at the 'External Causes of Disease', we have seen enough to account for at least a portion of human ill: but these are not all. In professional life, a gaping wound, or ulcer, is a sight by no means rare: but how much more frequent is the Physician called upon to treat a symptom, the cause, and perhaps principal effect, being unseen, — to inspect maladies by scientific light. A child looks upon the clock, but sees nothing to elicit observation save the painted dial, and hands moving by some unseen power: that power lies within. So in man, the power to will: the springs of sense are concealed. They lie deeply buried in the inward mechanism. When by the aid of scientific research, we are enabled to look into, and comprehend that complex mechanism — when we see nervous filaments and capillary ramifications, spread out as a net of gauze

upon the internal structure; and when too We are informed, that these are all liable to be disordered by the slightest irregularity; We cease to wonder at the diseased state, and turn in humble adoration to the great First Cause.

1. Moral affections.

(a.) The Imagination. The imagination may be suffered to roam at Wild for such a length of time, and to such a degree, that it often becomes a source of Evil. We frequently see this Exemplified in Females, Who indulge to an inordinate degree in Mental Speculations. — Who desire to think of nothing except imaginary future Misery; hence that Most unpitied of all diseases, Hysteria.

(b.) Memory. Reminiscences of former days, acting on the body through the Mind, may cause disease. Nostalgia is a characteristic of the Swiss Peasant, Who is obliged to leave his native hills. So notorious is this that Royal Edicts have gone forth, for the

Supposition of a simple lay, by which the herdsman beguiles the lagging hours. We have another touching illustration in the trial of the celebrated Patriot Emmet.

2. Sex. A certain predisposition is attached to the individual, as male or female. In the male we find disease sooner assuming a typhoid character, arising, doubtless, from the unaccustomed suspension of active labour. He is subject to hypochondriasis. In this sex also, we find a tendency to a gouty diathesis, and calcareous deposits.

The Female is troubled with diseases of the urino-genital System, as disorders of the Menstrual function. With diseases accompanying lactation, and of the Nervous System, as hysteria.

3. Descent. As children, We are liable to inherit defects of Constitution, as well as Anything Else. Thus in the Examination of a Phthisical Patient,

our first question would most probably be as to the disease of which his parents had died. Again Scrofula generally shows itself in the members of one family. The same remark is true of Gout Cancer &c.

4. Idiosyncrasy. Some persons are so constituted, that what may be tolerated with impunity by the majority of mankind, to them proves destructive. Two instances occur to me of two persons, in no wise connected, who upon leaving their residences in the city for the country suffer great uneasiness in the function of respiration, and what is still more singular, this effect is never produced until they have retired.

Again, diminutive doses of certain medicines act with more violence upon some persons than large doses upon the majority. During the last Summer, application was made for admission into the Wards of the Baltimore Infirmary by a British Seaman.

affected With general dropsy. Hydrag: Protochl: gr. v.
was administered, When he became so deeply
salivated, that it was With the utmost
difficulty he could take his food. It May
be interesting to Know, that after he recovered
from the affects of his Ptyalism, his
dropsy Was almost entirely gone.

5. Habit. This is a frequent cause
of disease. The habit of squinting may
be contracted at school by children, Which
finally Ends in perfect Strabismus. Prof.
Smith, lately related a highly interesting case
in point, having occasion to see a little
girl, he noticed marked deformity of the
elbow joints, Which proved to be dislocations of
Either. On Enquiring into the history of the
case, he was informed, that the child had
contracted the habit of carrying her hands behind
her in such a manner, as to cause the luxations,

B. Mechanical Causes of Disease.

We have already noticed 'External Mechanical Causes.' We may also have internal Causes, acting mechanically.

1. Ligatures. These by their presence may cause irritation, inflammation or ulceration.

2. Spontaneous Fracture. The muscles may be brought to act with so much Violence, that the strongest bones in the body may be unable to offer effectual resistance, and so are fractured. This is frequently produced, When powerful Exertions are made to save oneself from falling, or by slipping on ice, &c.

3. Morbid growths, may so grasp upon blood Vessels, Nerves or Surrounding tissues, that either Obstruction, Neuralgia or inflammation & ulceration may be produced.

4. Vital Changes, as Anemia, hyperemia, hypertrophy, Atrophy, &c.

C. Chemical Causes of Disease.

These are Substances which when taken into the Stomach, act Chemically, in Various ways; Either by combining with Substances found in the Stomach or by being absorbed into the Current of the blood. In whatever Manner they act, their effects are all or nearly all Specific.

1. Metallic Poisons. When preparations of these Substances are given in large doses, their peculiar actions are Very Manifest. Thus Lead, especially the Carbonate of its Peroxide, and its Vapours, has a Specific action on the Alimentary Canal. Again Mercury affects the glandular System.

2. Drugs &c. Substances that are Employed for the alleviation or cure of human Suffering, are often the Exciting Causes. When Employed ignorantly or without due caution. Such articles are far from being few. Thus Belladonna, when Employed for a length of time, produces a State of the System somewhat resembling Scarlatina

3. Venom. The Poison of certain Reptiles and insects, although not taken into the Stomach, yet by being introduced beneath the Surface of the Cuticle, &c act as frequently to cause disastrous consequences. In the case of Serpents the Poisonous fluid is speedily absorbed into the blood; that of bees act precisely in the same Manner, only in a diminished degree.

My task is Ended. Upon a Subject, boundless in Extent, and enriched by the Votive offerings of many a choice spirit in the Profession. I have dared collect a few scattered thoughts. My only apology is, the necessity of the case. — My only regret, that they are not Worthier.